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1.—*Extract from the Memoir of the Survey of Travancore, compiled by Lieutenant Conner.*

(Continued from the 7th Page of our last Number.)

Than Travancore and Cochin, few parts of the Peninsula present so great variety in its population, there is some difference of features and shade of colour, but they are still less distinguished by their habits and appearance, than alienated by prejudice and institution of cast. There is of course some analogy of character, and their manners too has a considerable affinity to those of their eastern neighbours, but each have peculiarities in their habits of domestic life, that mark a discrimination, in some points a much greater diversity, than would be inferred from their vicinity.

Receding a short distance from the coast, the character of the population perhaps somewhat improves. The provincial divisions present some varieties. To the south, probably arising from the deteriorating mixture of Vellaulers, they display an obstinate refractoriness, that it is often as necessary to coerce as to conciliate ; approaching north, particularly throughout Cochin, this waywardness of disposition is succeeded by a mild and peaceable demeanor ; their simplicity of manners is infinitely less vitiated than in other parts, at least it has received but little alteration from an intercourse with foreigners ; with prejudices infinitely more insurmountable and unconnected by any interest or intercourse that could occasion community of sentiment, they assimilate to Europeans still less than any other natives, nor perhaps need we much regret their ignorance of them, as such association too often diminishes their respect, and taints their virtues without abating their prejudices. The interior is seldom visited by Europeans, and to this perhaps may be ascribed the ready attention which the traveller experiences, but the natives by

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no means seek his acquaintance; indeed they are shy of strangers and retained by their attachment to the soil (which amongst all ranks is no where so powerful. It may be that the requisites for the support or enjoyment of life are here more limited or less difficult of attainment) for ever within the limits of their own village or district, they know or care little for other countries, have no curiosity of adventure, and even an imperfect knowledge of their neighbours, whom they regard as inferior to them.

Generally speaking except the higher classes of Nairs, and the inhabitants of the most southern districts, the body of the population are of a more passive and docile temper than those of the other parts of the Peninsula, their composed deportment and languid gravity of disposition, is not easily heated beyond its usual temperature, and never hurried into that animated vehemence of vituperation, so common on the other coast on the most trifling occasions of dispute; but it is easier still to stimulate their passions than excite their industry; their listless habits, in which the possession of slaves enables them to indulge, renders them averse to active labour, and except the very lower classes, whom a pressing necessity alone urges to diligence, they rather enjoy their possessions in lazy indolence, than increase them, at least at the expense of personal effort. It must be admitted however that mendicity is rare except amongst the christian population, who in fact furnish nearly the whole amount, which presents a greater and more disgusting variety of decrepitude than can be well conceived. Crime is not common, perhaps the more serious offences are less frequent than in the neighbouring countries; if at distant intervals instances of atrocity do occur, they are mostly traceable to the Maupulays; even theft is comparatively rare, and altho' many of the lower classes are tempted by the facility of concealment and urgency of want, this vice is not particularly ascribable to them. Falsehood is the common stain of the native character, but the distance between promise and performance is particularly remarkable in Malliallum, at least this part of it. The inhabitants of which are characterized as perpetual liars, the charge tho' too general in its application, may not be entirely unfounded, but it must not be conceived inconsistent with the possession of many amiable qualities, though truth does not constitute one of them, and they may perhaps be considered as exercising many virtues as their neighbours, but not exactly of the same stamp, at least an abatement must be made on the score of continence which is by no means the most ready attribute of the community here. To mend their morals a more general diffiusion as well as improve-

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ment in the system of education is necessary; ethics at present forms no part of their studies, which rarely advance beyond the first elements of knowledge, and such limited accomplishments only belong to the superior classes, who however are susceptible of higher attainments, particularly the Nairs, who have a quick apprehension, are admirable accountants, and perform the operation of writing (leaves every where being substituted for paper) with a rapidity and adroitness quite peculiar to themselves. The language spoken differs in the southern parts where it is largely intermixed with the Tamool, but we do not here observe that mixture of tongues so common on the other coast. The inhabitants of this, never speak any but their own, nor does even their intercourse with Europeans tempt them to acquire their language. Circar schools, two in each district, have been established for the benefit of the community at large, but it would infinitely improve their efficiency were the number as well as the plan (tho' it must be confessed the natives are little disposed to excursive knowledge) on a more enlarged scale. The inferior ranks are wholly untaught, but an alleviation of their physical wants must precede any mental improvement.

They bear a general resemblance to the people of the other coast, but have a greater symmetry of person, a fairer complexion, more mild and agreeable features; nor do we ever see amongst them that shrewd over reaching cast of countenance, so common there; natural deformity is rarely met with, but some diversity of exterior is observable; allowing however for the difference, that coarser fare, greater exposure and severer labour will produce, a great family likeness is perceptible throughout, they have (particularly among the higher orders) an expressive, pleasing though not always fine physiognomy, generally a delicate formation of person, which is rather perhaps below than above the ordinary standard. The stature of the women is inferior to that of their neighbours, but their attractions rather condensed, than diminished, give them claim to a more than equal measure of perfection, particularly those of the Nairs, who have a soft fulness of form, and elegant but fragile contour, while a carriage singularly graceful, lends additional and dangerous allurements to their dusky charms. To their precosity must be ascribed their early decay, with them their is no intermediate space between the freshness of youth, and decrepitude of old age. Rank and cast experience here a degree of homage that in other parts of the Peninsula would neither be required nor given. In the presence of a superior, and each exacts the same observance

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that he pays, the Moondoo is removed from the head or shoulders, the hands united are raised for a moment, when the right is applied to the mouth, which is partly free from this polite barrier during the interview, or rather the laxity or rigour with which it is guarded depends on the relative ranks of the parties. This address would appear rather obsequious than respectful, but deserves not the charge of servility. Amongst the higher order of Nairs, an elegance, almost dignity of demeanour, natural and superior to acquisition is not uncommon.

Most of the superior classes substituting physical purity for more material virtues make frequent use of the bath, ablution is a necessary preliminary to meals, the superior orders practice endless subsidiary ones, but they are too fastidious in their notions of defilement, as they can scarcely leave their house, or be approached by any of the lower classes, without undergoing some supposed pollution, many of the very lowest ranks (whose name is an invective) so strongly feel the odious peculiarities attached to them that they fly on the approach of a superior ; contact with them is regarded as contagion, and with even the middling ones viewed only as a less deep stain. To avoid the communication of such a taint when delivering any article, they place it on the ground, putting a leaf under it and retire ; indeed to avoid contact all classes throw rather than hand what they may be desirous of giving ; it may be added that this feeling, so destructive of social intercourse, extends to the very lowest ranks, who view as a species of contamination the touch of those beneath them in precedence. The women have a profusion of dark hair, which they carelessly dispose in a knot on the top of the head, on the fore part of which the men wear a single lock, which arranged with artful foppery is an object of vanity with the young ; in every instance this internal vegetation is removed several times in the course of the year ; even the eye brows marked only by a thin line of hair share the denudation ; we could perhaps wish the retrenchment extended to the nails of the hands, particularly those of the right, which are regarded as becoming in proportion to their length.

If nudity be considered as provoking sensuality, the costume of the people may afford some excuse for that ascribed to them, its simplicity would denote its antiquity. The various classes have little diversity of garment, nor indeed is any seen throughout the country ; even foreigners (inhabitants of the eastern province &c.) assuming the vesture of it, which requires but few cloths, consisting chiefly of a cloth (known by the term Moondoo) passed round the waist and

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reaching to the knees (amongst the more wealthy classes, it extends to the ancles) forms a short petticoat or kilt, a handkerchief thrown loosely over the head and covering the shoulders form a sort of cowl, this is substituted for a turband, it is occasionally tied though commonly left flowing, but in either case affords no protection against the sun, their chuttries (and they consider them an indispensable part of their equipment) are supposed sufficiently to answer this purpose, indeed some of their ordinances direct that the head and feet shall always remain uncovered, a precept very generally observed ; in the latter instance, the colour of the cloth worn is slightly tinged, with indigo, its texture rather than quantity differs with the ability of the weaver : it is often or generally so transparent as to shade rather than conceal the outline. The female costume is somewhat similar, but (inverting the usual order of things) has a more masculine appearance, a portion of the cloth, forming the short petticoat being passed between the legs and fixed in the girdle behind ; this scanty vesture reaching only to the knees, the upper part of the person is permitted to remain uncovered, as a handkerchief thrown carelessly over the head and bosom is worn with no view to concealment, indeed on ordinary occasions entirely dispensed with, the eye is at first startled with so much nudity, perhaps arrested by its novelty, to which however it becomes readily reconciled, but it is impossible not to admire the unsuspecting simplicity, that endures the gaze of surprize insensible of being its object. Their costume it must be confessed leaves more to engage the attention, than pique the curiosity, but the display is as often productive of disgust as admiration, a greater fastidiousness might perhaps desire that it allowed less scope for either ; their drapery however scanty is sometimes arranged with singular grace, if we could desire its folds somewhat ampler, a wish for their superior comfort must have a large share in exciting the sentiments. The children go naked till the fifth or sixth year, and most of the lower classes it may be said are almost always so, as the little rag that decency requires can scarcely be called cloathing ; amongst half the population the wardrobe of an individual will not exceed the value, if it reaches it, of two Rupees, and thrice that amount would purchase a handsome suit ; the comparative wealth or poverty of the different classes is not easily distinguishable* in their dress, nor do they display much taste for splendour, in their ornaments, which are rarely increased in

* A few marks carelessly arranged and made with the powders of sandal substitutes the intricate hieroglyphics, that on the other coast seem to denote cast.

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number or value, they are generally limited to a silver pen fixed to the waist, a chain of the same metal forms a girdle, to which seals or keys are attached, the fingers are sometimes loaded with rings each having several ; a knife six or eight inches long, the hilt of which is carved, invariably accompanies the pen, this is an indispensable article performing all sorts of offices, even the lower classes are never seen without one stuck in the girdle. The female ornaments are more numerous, though by no means of that complex character worn by those of the neighbouring countries, a perverted taste distends the lobe of the ear to a most extravagant size, it frequently reaching to the top of the shoulder, the appertures thus formed are filled by ponderous pendants of ivory or ebony, or by the leaf of the palmyra rolled into a circular form, they occasionally lavish much of their finery on the neck, which is sometimes observed encompassed by a collar or necklace of gold, from which a few trinkets are suspended, but the more general ornament is the Tally, which is merely a thin cotton cord, to which is affixed a small gold ornament; amongst the wealthier classes a single bracelet of the above metal is occasionally observed, this distinction is only assumed by the other sex when conferred by the chief.

Subsistence is almost entirely derived from agricultural labours, nor do the temptations of commerce attract even the wealthier classes from rural pursuits, which are most esteemed, the handicraft professions being, it has been seen, abandoned to the very lower ranks, nor does the practice of them always secure a certain livelihood, though that might be earned without the interrupted application of industry, might be concluded from the abstemious character of their diet, even that of the higher ranks knows but few delicacies, those not at all intelligible to our luxury are even disregarded by their neighbours, who decry the extreme simplicity of their taste. Conjee or Rice soup (a leaf invariably performing the office of a spoon) forms the first meal, the second consists of Rice (dry grains being very little used) their condiments are of the most ordinary kind. The pulp of the mango reduced to a paste and dried, having been spread on mats for this purpose, is amongst the best. The ordinary oil is a common substitute for ghee, but little animal food is consumed in the interior, those living near the sea in a great measure draw their support from that element. The cocoanut in all its shapes constitutes one of the chief articles of subsistence, and the jack, plantain, and mango, are here articles of the first necessity rather than luxuries—the kernel of the latter is

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ground into flour, rice constitute the food of the lower classes for but a portion of the year, their scanty store exhausted, great variety of the yam, cultivated tuberous roots, and sago produced from a species of the palm, affords a substitute, many of the hill tribes subsist almost entirely on arrow root, and the kernels of the eendu, which having been boiled and steeped in a stream for two or three days, operations necessary to extract their poisonous qualities, are ground into flour, but the mountaineers are not alone reduced to this meagre fare, that of all the lower classes is frequently precarious, often, unwholesome and scanty; an indiscriminate appetite makes wild roots of every kind, particularly of aquatic plants, for which the Polayen is seen searching up to his neck the waters of the lake, lizards, mice, &c. contribute to supply deficiencies, nor will much be rejected by a taste to which the alligator is acceptable, many of the most inferior classes being often reduced to this revolting fare. The expence of a Nair family in tolerable circumstances will not exceed ten or twelve Rupees a month, of a Showan family probably not more than a moiety of that sum, which with a Polayen may still be reduced by half: the daily produce is generally consumed at home, butter milk diluted with water and rendered very acid by an infusion of leaves, partly aromatic, being the ordinary beverage; but they do not confine themselves entirely to so primative a one, most classes (nor have the bramins quite escaped the imputation) indulge in the use of spirits, the temptation is great as it is so easily indulged, the quantity purchased for a few copper coins being sufficient to intoxicate, like all other natives their potations are unsocial, the harsh spirit sufficient for the purposes of their course intemperance being more calculated to produce oblivion rather than conviviality. The better ranks too, are addicted to the use of soporifics (particularly opium) a vice by no means uncommon even amongst the christians, whose pastors are not proof against its allurements; but the placid intoxication it produces is not followed by ferocity, nor do their orgies however intemperate ever end in riot. Of their domestic accomodations little can be said, it has been seen that with the better ranks their houses are objects of vanity and care, feelings that do not extend to their furniture, rude couches, and some brass culinary and household utensils appearing the only articles meriting that designation; a singular simplicity that makes every thing answer every purpose, converts the bark of the Arreka to many domestic uses.*

* Or rather the spatha or leathery covering, that encloses the fruit in its early state.

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On the whole though we cannot attach any great value to the standard of their improvement, or characterize the people as deserving the reputation of great industry or pure morals, yet they are superior to their neighbours in many things that exalt one class above another; it must nevertheless be allowed that the relative condition of master and servants is here more unfavorably contrasted, and that with equal or greater resources than them, the condition of the lower classes is generally inferior to the corresponding ranks of the neighbouring countries, and their indigence is rendered more striking by the comparative affluence of the higher orders, who agreeable to their measure of it, have a considerable share of enjoyment, their distinction might perhaps be partly traced to an apathetical disposition, that renders them indifferent to higher enjoyments, but perhaps there would be more justice in ascribing it to the tyranny of cast, an indellible line here separates the different ranks, in no part of India are those unnatural divisions so strongly marked, so anxiously regarded, or their degrading or enobling association in such activity.* The enumeration of fifty two casts shews the divided character of the population, but the scale of precedency is still more minutely graduated, each cast being split into various subdivisions, which though serving to divide, as well as distinguish it would be difficult to follow through all their intricacies. It is however observed that the feelings they involve, have been somewhat assuaged. The bramin less deified, permits the Nair to approach him, while he in turn amongst other concessions, submits to the christian being seated in his presence, nor dare he now sacrifice the Polayen to his caprice, or indignation, but the implacability of those prejudices must be infinitely more relaxed, before the lower classes, the most valuable part of the population, and on whom depends the whole productive industry of the country, can rise above their present state of debasement. Their condition (though improved and improving) excites our pity, often our disgust, but above all the situation of the Prœdial slaves most deserves commisseration, as at once amongst the most useful, suffering a wretchedness scarcely susceptible of aggravation.

Bramins—Though divided by cast the population have a great similarity of manners, but formed of such a medley, an outline of its component parts may be desirable. The Bramins to the south of Quilon are called Poties,† in the more northern parts

* The number of paces to which each may approach the other, is minutely defined, a step beyond entails pollution and punishment.

† They will be spoken of generally under the latter denomination.

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Nomboories, a denomination confined to those of Suddikerala.* The Alwanchayree Tambrakal is viewed as the chief of the Nomboories, though he possesses no distinct jurisdiction over them. In the scale of precedency the Adhienmars, or the descendants of eight principal families who once ruled Kerala, hold the first place. Pad is a title bestowed on superior rank, sanctity, or learning. Those who have performed the Ootram are termed Akkaterypad; skill in the offices of priesthood, obtains the appellation of Buttaderypad, while those who have achieved the sacrifice of the Yoigam, merit the title of Chomadreepad, and enjoy the privilege of wearing large gold ear-rings, those having controul in temples are called Muttumadda Putter, if Poties, Tundreeadhein. The learned in the Vaidans, Sandies, or officiating priests, there are Sunneeasees of various appellations, ranks, and shades of difference, though such a life does not here imply the observance of any very inconvenient austerities. There is too considerable distinction of property, but the Nomboories are not split into sects, each deity has an equal share in their homage, nor do their opinions or practice, except in some frivolous observances, differ from the bramins of the other coast, they are said to be lax in the performance of their religious duties, at least less scrupulous than formerly, they deplore but don't amend this degeneracy of faith and zeal; which the Putters over whom they claim a superiority, (denied by them) ascribe to the malediction of Sancara Atchayrai. They have no Agrarams, nor do they ever live segregated, loving retirement, they court the seclusion afforded by the vallies of the interior. Their Illums, large and commodious, canopied in foliage, and seated on the bank of some river or stream, breathe an air of undisturbed repose, and evinces a considerable share of affluence. Those not possessing property, it will have been seen, derive an ample subsistence from the religious establishments: this they receive as a right not as charity. Pursee Rama, having conferred on the Nomboories, all temporal as well as spiritual authority, they still profess to claim the sole sovereignty of the soil, though their possessions have been considerably reduced. At an earlier period they held unbounded sway over the minds of the people, nor has this pernicious influence yet entirely ceased, but originating in the degradation of the lower orders it must decline as they improve. The Nairs are still in some measure their slaves,† at least when holding or superintending their

* The name has some reference to their having been (as the legend says) emigrants.

† In addressing the bramins they style themselves so, and are called generally by them Adhienmars or slaves.

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lands, but it is an easy servitude in which they are held by interest and spell of cast, rather than law, somewhat aristocritical in their notions, they are shy and rather avoid than seek intercourse with strangers, but the reserve of ceremony once worn away their manners are courteous, but chargeable with the refinements of dissimulation and guile, they cannot be regarded as forming any index to their disposition. They have no influence in civil affairs, and with some trifling exceptions are not engaged in them, but their sanctity not appearing offended by the profane duties of public life, this abstinence cannot be ascribed to a voluntary forbearance. Prejudice prevents them from engaging in any useful profession, some are employed in the performance of religious offices, but the greatest part indulge in indolent repose, and if an easy voluptuous life with nothing to ruffle its uniformity be happiness, they enjoy a large share of it, it is not even interrupted by the cultivation of literature, their erudition rarely exceeds a very imperfect knowledge of sanscrit, they however speak a pure language; of their recreations it is difficult to speak, the vain science of divination serves sometimes to divert their lassitude. Though holding familiar intercourse with other bramins, they will not intermarry with them, and scrupulous as to their alliances decline extending them even to the Poties. Polygamy is nearly unknown, the eldest son of a Nomboorie family alone marries: a restriction imposed probably to prevent the diminution of dignity by the increase of numbers; or that of wealth by too minute divisions of property, should the eldest son have no issue the second marries and so on till the object be attained. In consequence of this custom, the females often enter into wedlock at a very advanced age, or die in a state of celebacy, but so tenacious are they of their observances that the corpse undergoes all the ceremonies of marriage; an Arria Putter performing the part of bridegroom in those posthumous nuptials. Numerous daughters are considered as a misfortune, their dower and other necessary expenditure consuming a large share of the family property. In the selection of a wife, female mediation directs the choice as the veil of concealment is not removed till after marriage, when it is too late to profit by the discovery; but cupidity would seem the only passion necessary to be gratified, as a stipulation on the score of dower always forms the most important article of the treaty, it is unnecessary to repeat the detail of céremonies that follow its ratification, and equally so to describe those of their obsequies. Voluntary cre-

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mation of the widow on the funeral pile seems unknown here,* at least they do not now aspire to the honor of this superstitious, sanguinary, but generous devotion, for which is substituted the easier ceremony of consuming the Tally. Nothing can exceed the precautions taken by the Nomboories, to seclude their women from the gaze of profane eyes, guarded with more than moslim jealousy, their nearest relations are interdicted communication: even brothers and sisters are separated in early age. The women are known by no other term than Unterjennem or Agotamar, which may be translated the concealed, their seclusion is more strict than that of a cloister, if venturing to some neighbouring temple, rolled in cloth, fortified by a large umbrella, and preceded by a female servant, who commands the absence of all intruders, they escape the view of the curious. Where chastity is so strictly guarded, a breach of it is not easy, instances of frailty however are not unknown. If the crime be committed with a man of a lower rank, both offenders escheating to the Circar, are sold as slaves to some of the inferior classes, in earlier times it was visited by still further severities. But the indignation it excites is in no measure extended to similar transgressions of the other sex, a ready casuistry reconciles them to the practice of forming connections with the Nair women, a Nomboorie being supposed to honor the family from which he chooses a paramour, finds one in every house. The Nomboories are comparatively fair, well formed, and their women said to be distinguished by their beauty,—their costume except in being somewhat less scanty differs in nothing from that of the Nairs, the privilege of wearing gold bracelets is the only peculiarity in their ornaments, their cleanliness deserves commendation, and might be ranked as almost a secondary virtue, did not much of it arise from superstition.

Numbuddy, Mootoodda, Aghapaud, Ovel, and Eelieadoo are inferior casts of Nomboories, each forming different ranks; they are the descendants of bramins who were degraded from the station they once held for various transgressions at some remote date; tradition has handed down the story of their disgrace, but it is unnecessary to repeat the tale.

Of Foreign Bramins—The prospect of gain and the high veneration experienced by the bramin cast in Travancore, attracts crowds from the surrounding countries. The Putters trace the date of their first emigrations to the period of the earliest Kshetry Princes,

* Although it would appear very common on the other side of the Ghauts as is seen, in the number of rude monuments commemorating this event in Shencottah.

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when their numbers were few, their reputation high, the increase of one, has proportionally deteriorated the other, but the influence of superstition still enables them to hold a place in opinion, that their own equivocal reputation could never deserve. It is unnecessary to minutely enumerate the various classes of foreign bramins that resort here. The Imbrantries from Toolonaad, (Canara) and Putters from the Tirnavelly, Tanjore, Coimbetoor are the most numerous. The latter are collected under Summooghum Muddum which serve as a point of union; they are seventeen in number, and scattered throughout the country, each individual attaches himself to one thus forming little communities or corporations, the Muddum has generally some funds of its own, but all belonging to contribute to its support, and the property of any of its members who may die without heir or intestate devolves to it. Some of the foreign bramins remain permanently, but their abode in most cases is temporary, as they believe that dying in Malliallum exposes them to the risk of transmigrating in the body of an ass; a fate averted by a timely retreat. They are chiefly engaged in the pursuits of commerce, which leads them frequently during their residence to visit the other coast; they traverse all parts of the interior finding a subsistence at every Pagoda, or Ootuperra, and this indulgence they are careful liberally to avail themselves of, the object of all is to accumulate a certain property with which to retire to their families by whom they are rarely accompanied, they are indefatigable in the pursuit of this end, which their singular perseverance and economy generally enables them to accomplish. Ambitious of office they often attain it, but are generally seen performing some of the minor duties of the temples, often in still meaner occupations, frequently of a secular kind, but nearly half are merchants, trading in cloth (of which they once had the exclusive privilege) and grain. The Imbrantrie has some amiable qualities, and is by no means remarkable for the wily duplicity that distinguishes the Putter, but it is superfluous to draw the character of this class of men; emigration has not enlarged the sphere of their virtues, and they may be considered as ranking greatly below the Nomboories in every estimable quality.

Kshetries—The introduction of the Kshetries into Malliallum appears to have originated with the dynasty of Sharren Permaul, the most eminent are called Tumbeemars, or Raujah Coomar Tevoomapaud, denotes those of lesser dignity, there is some difference in point of rank and privilege, the Saumunder class though belonging to the Kshetrie tribe are of secondary estimation. It is superfluous to detail

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their minute peculiarities, their general character and customs so much resemble those of the Nairs. As with them the manner in which the race is continued gives a wide scope to the wandering sensibilities of both sexes. The choice of the female is confined to the Nomboorie tribe, but restricted in quality not quantity, a fickleness that readily changes its object finds abundant room for selection. The offspring of this connection belong to the Kshetrie cast, the males are debarred forming any union with the women of their own tribe, but such being considered a high distinction amongst those of the first rank, of Nairs, bewildered amidst profusion, the Kshetrie only experience the embarrassment attended on so wide a choice. The progeny springing from such an union, ranks with the Saumunder cast. The Kshetrie abstain from animal food, aspire to consideration from the number and variety of their ablutions, and emulate the bramins in their theoretical piety, probably practical vice; which however is partly redeemed by the presence of some virtues; most of the petty chiefs are of this tribe, but with few exceptions none belonging to it possesses either authority or wealth.

Umblawassies—The Umblawassies hold a rank immediately below the bramins, to which tribe it is said they once belonged, they still continue with the exception of the Varriar, and Mauroyen to wear the sacerdotal insignia. The Umblawassies, though numbers of them are engaged in agricultural pursuits, are generally dedicated to the service of the temples, (in fact they are the Deeadassee of the other coast, but much more numerous than the correspondent class) they differ in nothing from the Nairs except that the cast is kept up, as with the Kshetries through the intervention of bramin's assistance. The women of it being solely devoted to that race, while the offspring of an Umblawassie by a Nair woman becomes a Shooder. They are of various denominations, the Shakkaiur performs as dancer in the Koothu Umbalums of the Pagoda; the employment of Pooshagum consists in collecting flowers to decorate the Idol, the deities of the Poosharodu are of an inferior nature. The Varriar, Nangiaar, and Mauroyen, compose the chief musicians belonging to the Pagodas; sound the chank in announcing the approach of Nomboorie Saniassee; profess the science of astrology &c. The last mentioned holds the lowest rank, to his other vocations adding the performance of some menial offices about the dead.

Nairs—The Nairs may be considered as constituting the soul of the population, they are all of the Shooder tribe, but split into various classes. The Velloymah hold the first rank, they are only seen

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in the more northern parts, where the Keereeathee class are also more generally found. The Illacurra and the three succeeding ranks predominate throughout Travancore, the above term signifies one belonging to the house of a Nomboorie, and may probably denote the state of dependance in which they were retained by the bramins; while that of Shroobacurra applies more particularly to those who were held in vassalage by the chiefs. Paudamungalum, and Tamulpaudum, (appellations denoting those who were under the controul of temples) constitute the fifth and sixth classes. Pulicham are the bearers of the Nomboories or higher ranks, but performing this office for no others. The Shacouller, or Vellacaudoo, are those following the profession of oilmongers. The Poolicay, or Andem Nairs, are potters. Vellathudum or Errinkolay, Purriarrie or Vellakathura, are washermen, and barbers, of the bramins, and Nairs, but will only act as such for them. Aggatuchurnaver, are those who perform some menial offices for the former. Yeddachayray Nair, or Yerma Shaudra, are cowherds. Cullatu Nair, or Velloor Nair, are empiricks. Yahbary, merchants. Oodatoo Nair, boatmen, Attycoorchy, or Sideear, a low cast who perform the necessary offices about the dead. There are four principal classes of artificers, silver smiths, braziers, black smiths, carpenters, who constitute (tho' separate in themselves) a distinct body, and are the lowest rank of (if they can be included amongst) Shuders. Many minor subdivisions might be added; each of the above orders are still further graduated and discriminated by various shades. It must be observed, however, that those belonging to each particular class, are by no means confined to the vocation, some of them would seem to point out, and the profession must be generally considered as rather serving to denote a distinct rank than indicating an occupation; this remark it will be seen is alike applicable to the several divisions of artists. The males will eat (and with them the circumstance is important) with those belonging to their own cast, though somewhat lower than them in rank, but they do not carry their condescension very far; the females are quite inexorable on this point, and in many instances even decline using the vessel that has been touched by a person of inferior* (however slight the difference) order.

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*Their fastidiousness is occasionally inconsistent. The bramins receiving as food a confection made by the Concanies, as the Nairs do a sweetmeat made by the christians.

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The character* of the Nair, in some points rises above that of his neighbours, but it is made up of anomalies, a highmindedness, sensibly alive to personal insult, is united to an insidious duplicity, a rapacity difficult to satisfy or satiate, a more than equivocal integrity at least when in office, and perhaps only then, as they exhibit no particular distrust to each other, and an ingenuity of falsehood that can affirm or deny with equal facility; but there are not wanting qualities to modify and soften many of those darker shades; in their intercourse with each other they are mild, perhaps amiable, nor are they by any means strangers to domestic or social virtues. They possess a considerable share of intelligence, though probably they have more subtilty than ability in business. To their equals their demeanour is courteous, the degradation of the lower orders will account for, and partially extenuate their arrogance towards them, but if haughty, the feeling at least is free from any mixture of cruelty. Though having no sentiments of martial independence, (indeed their virtues as well as vices have a tincture of effeminacy) they have the reputation of being brave, but their courage is of the usual Hindoo kind, rather apathetical than active. Life supported with patience is quitted without regret, and when forfeited to offended laws, is resigned with an unequalled degree of stoicism. Though capable of exertions, they are prone to indolence, a listless disposition satisfied with indigent care, supplying no stimulus for exertion, as in other parts of Malliallum; they must gradually give way at least in point of property, before the superior industry of some of the inferior ranks. All the servants of Government, are taken from this class, they are particularly solicitous of office, and it has been seen how well disposed they are to abuse it, in those cases, they are more profligate in acquisition, than lavish in consumption, and perhaps may generally deserve the character rather of economy than prodigality, except those on such occasions almost all live on their lands, the latter classes have the enjoyment of much leisure. If the business of agriculture require their attendance, their employment is more of inspection than aid.

The higher orders of Nairs, are known under the collective term of Maudumby, or Prubbukamars, designations under which are comprised various others; the most common are Kurtaos, Elluiddum, Kymulla, Kurupu, Mainawen, Pulle (the two latter are also used as professional offices) in which there is a nice gradation of

* It bears except in the particular that requires the fidelity of the men very remarkable resemblance to that given of the Natchiez, a South American tribe.

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pre-eminence, those denominations were originally allied to some authority, and still command respect, but serve now to distinguish rank, rather than influence or property, with regard to which they are pretty much on a level, they are hereditary, were often bestowed on merit, but more frequently obtained by purchase, they conferred some privileges amongst them, that of having a parasol borne over the head,* wearing a golden bracelet, being preceded by a particular kind of lamp, or having the writing instruments worn at the waist, made of gold, those were also ensigns of office, but a wider latitude being now allowed to their assumption, they have of course lost much of their value. Proprietors of land are always known by the title belonging to their estate, or rather its designation is invariably used as a prenomen.

The state of society on part of this coast is in some measure peculiar to it, at least the economy of a Nair family differs from that of almost any other race of Hindoos. The uncle, or as he is styled Taruwuttee Kurnaven, is the head of it, his eldest sister the mistress. A family of brothers and sisters generally live together, and in most instances with a degree of harmony that might serve for imitation. The sons of the latter are invariably the heirs, and nepotism substitutes the place of parental attachment. The bastardy of the children, and ascendency of the women, that in Malabar so offended the prejudices, and shocked the morality of the Sultan, would have here given equal room for his reprehension. They are less passive, have more influence in society than most other parts of India, and are infinitely less restrained in their intercourse with it, they have a quick understanding, are said to display great aptitude in acquirement, but a capability of reading the Ramayen, is in most instances the summit of their attainments, they are often rich, frequently possess landed property, the details of which they manage with great ability. The commerce of the sex, is regulated by a singular system whose cause is effaced in the antiquity that has sanctioned the practice. Its real nature and remote consequences is too intricate a labyrinth to be readily developed, but the subject is sufficiently curious to deserve mention, and such must be received as the reason of its introduction. The young Nair girl, at a very early age, undergoes the form of having the Tally tied, this with the wealthy is an expensive ceremony, (a crowd of guests being feasted for some days with rural

* The use of this article is common and necessary, but the honor consists in its being carried. Every Nair, of respectability is seen followed by a boy who performs this office and also bears his brass vessel and beetle apparatus.

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profusion) but indispensable with all, he who personates the bridegroom receives a certain recompense, any of equal or superior rank are eligible, but a number and variety of minute combinations† of which the detail may be postponed are required in the selection. The astrologer decides those points, and fixes the auspicious moment for performance; receiving the Tally though a requisite, is a mere form, and conveys no claim to a more intimate connection, altho' on the death of either, the survivor practises those ceremonies that would be observed, were the union of a more material nature. Such is the premature ripeness of the climate, that at the age of eleven or twelve years a girl has reached maturity, the moment of its attainment is announced to the neighbourhood by a loud chorus of the women, who have collected to celebrate the occasion, a rude minstrelsy, repeated at intervals for several successive days, suitors early present themselves, and the acceptation of a lover is signified by receiving from him a Moondoo, some brass utensils and other furniture, also annually clothes, oil, &c. &c. amounting in ordinary cases to about forty or fifty Rupees, four times that sum would be a handsome establishment, which scarcely five in a hundred could afford, and among the lower classes half of it may be considered near the medium. This union is termed Vissivassum, a great misnomer, as it in no measure binds either party, and perhaps we should overrate their morality in supposing that one such union in ten continued for life, and where the connection is of such stability, it is a matter of understanding more than enactment. The mistress of a Nair, generally resides in her brother's house, having no authority in that of her paramour, by whom she is visited at intervals, but he in the mean time, must not be too scrupulous in guarding her against the encroachments of interloping competitors. Hearts equally capacious as susceptible, are not always engrossed by one lover, if too fastidious in admitting an associate, he is discarded, as the female enjoys in some measure the power of repudiating, a tempting prerogative, that the levity with which they bestow or transfer their favors, would prove was too often exercised, but prompted by grosser seductions, and indefatigable in their loves, they are represented as inviting or enduring from mercinary motives, an endless succession of paramours, but the imputation appears too exclusive in its obloquy, as they would seem to be the sport of the same caprice, with which they are re-

† The parties must have been born under the same Planet. The astrologer with the high orders of the village Register with careful accuracy the moment of birth.

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proached. Held by so loose a tenure, it might be supposed their frailties would not create much domestic confusion, but jealousy is by no means unknown, that amiable passion producing even here tragical events, although it must be allowed they do not often permit it to trouble their harmony. Chastity not necessary to reputation is but lightly valued; its infraction is regarded more as a failing than a fault, and only as a crime, when the intercourse has been beyond the pale of their own particular cast, both sexes, must confine their amours within this limit, the severest penalties being announced against its infringements; except as has been seen in instances of the higher classes, who on this occasion readily sacrifice their scruples; cast sanctifies every immorality. The bramins of all descriptions are courted with a caressing homage, the most obdurate virtue could scarcely resist, nor do previous engagements oppose any barriers to their success, as the Nair compelled to resign his mistress to more holy embraces, retires on their approach, not venturing however, strong his claim, or forcible his attachment, to interpose between their enjoyments.

This system though more particularly belonging to the manners of the Nairs, serves as a precedent in some measure to most of the other classes, at least marriage in the ordinary acceptation of the term, is nearly unknown amongst them; their union is regulated by the inclination of the parties, and a mistaken choice soon rectified, leaves Hymen here no scope for the exercise of his malice. Amongst some of the classes of Shewans it is not uncommon for the female, to confine her favors to the brothers of a family; this practice which is regarded as strengthening the ties of fraternity, is also common amongst the cast of Artisans, in the southern parts it is however decryed, by the superior orders, whose practice it may have been observed, is of a still more reprehensible complexion, indeed they, but particularly the bramins, are represented as displaying an ingenuity of licentiousness difficult to relate, or amplify, the lower classes, cooled by poverty into comparative continence, are in some measure shielded from the contagion of their profligate example, but the intercourse amongst all ranks, is too promiscuous, and the feeling that leads to it (here more an appetite than a passion) less restrained than in the neighbouring countries is productive of great irregularities, but it is at least a decorous vice, that never obtrudes itself on the observation, and is by no means accompanied by any corresponding corruption of manners, however repugnant to our ideas of propriety there are not wanting circumstances of extenuation,

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nor should we be too readily disposed severely to arraign their immoralities, at least our reprobation will be mitigated by knowing that they are rather ascribable to the institutions, than any particular vice of the people. The Nair women cannot be said to be prolific, although it has been seen that the chance is not confined to one. On the birth of a child, if a boy, the same musical celebration that has been noticed is repeated, the enumeration of the various subsequent ceremonies, and those observed on particular occasions during its early years may be postponed. The uncle charges himself with their performance, he alone is regarded as protector of his sister's progeny. The father rarely contributes to their support, shares but little of their regard, and if known is soon forgotten, the mother however enjoys a more than ordinary share of veneration and influence. The Nair should burn their dead, but when poor they are necessitated to bury them, the corpse or ashes are always entombed within the garden, south of, but contiguous to the house; they do not exhibit that scenick sorrow displayed by their eastern neighbours, but if their grief is less unruly, its sobriety must not be ascribed to any coldness of domestic affection; it were tedious as unnecessary further to pursue the detail of their other customs and ceremonies, which only differ in some minute particulars from those common to the other portions of the population.

Various Classes of Shooders of the race common to the other Coast—It will be seen that the Paundee Shooders, (for such is their general designation) constitute a large portion of the population, indeed they may be considered as forming an original portion of the permanent inhabitants of Shenkotta, and the more southern districts, but those found in the more southern parts of the country, contribute greatly to swell their amount, in the latter instance they are chiefly emigrants, (or their descendants) from the eastern coast.—Numbers possess lands and permanently remain, as indeed do all that can obtain a livelihood, a large portion are seen as traders, artificers, peons, or servants &c. &c. The character of this class is too familiarly known to require here any illustration. Those composing it retain here all their ancient habits, and continue to form a distinct body.

Mussulmen—As do the few Pautan Mussulmen found in the country; they chiefly reside in the southern districts, and are for the most part the descendants of a body of Pautan sepoys, that swelled the military rabble retained by the latter princes of Travancore;

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rather disposed to arms, than arts, a more peaceful rule has reduced them to a considerable degree of indigence.

Lubbbees—The Jona, Mapulay or Lubbees, inferior classes of Mahomedans, constitute a more important and valuable part of the population, the former nearly double in point of number, are found generally in the vicinity of the coast, the latter of whom numbers are emigrant from Paundy are more in the interior. Many of the last class lead a sort of migratory life, sharing their residence between this and the other coast, with which their mercantile habits lead them to keep up a constant intercourse. The Jona Mapulay, (or as they are known in the southern parts Maiters) though of foreign lineage being descended from the first Arabs, whom commerce attracted to Malliallum, must be considered as more particularly belonging to it. Maslims in creed, they are almost Hindoos in person, and in point of character unite many, nearly all the vices of both. To the violence that too often characterizes the professors of their faith, they add a patient inveteracy and dissimulation, ready to conceal, prompt to execute its purpose. They are much disposed to traffic, but not averse to agriculture, are intelligent, indefatigable, unscrupulous, possess some wealth, have considerable landed property, and are gradually rising on the supineness of the other classes. Stubborn and turbulent, they require to be held with a strong hand, but though troublesome, their superior perseverance in industry renders them productive subjects.

Concanies—Which may also be said of the Concanies, who have all their habits of unwearied diligence without any of their vices. This class came originally from Goa, having fled on the conquest of that place, first to Callicut, thence here, where they found a toleration denied them by the bigotry of the Portuguese, and escaped the rapacity of the Zamorine. They possess some lands, but are devoted to commerce in all its shapes, and deserve the merit of at least a very tolerable share of integrity and fair dealing. A series of centuries has in no measure altered their character, or diminished the force of the institution. They are divided into three classes, the two first are separated only by some trifling distinctions, the latter the Jeedeenmars are the servants or slaves of both.

Christians—The origin of those ancient believers, who appear to have existed from the earliest ages of the church, is a subject, that might deserve enquiry ; and the singularity of so large a population of christians unadulterated by proselytism, is sufficient to attract and fix the attention, but so much is already known, or rather so

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many conjectures already offered regarding them, that little of novelty can be added; however curious a very minute investigation would necessarily be difficult, as the people know but little of their own history, and possess few documents that could illustrate it. Agreeably to the loose tradition, that still holds amongst the Nazarines, christianity owes its introduction into this part of the Peninsula to the Apostle Saint Thomas, who entered Malliallum in 52 A. D. He established seven churches, ordained two persons of consideration from Nomboorie families, and took other measures to promote the practice of the divine doctrines he preached; returning towards the eastern coast, from this successful mission, he underwent the last honors of christianity. The martyrdom of the Apostle first relaxed, and then almost extinguished, the zeal of his converts, who rapidly sunk into their old superstitions, their numbers and hopes were after a lapse of nearly two centuries reduced to eight families. At this eventful period A. D, 345 the Patriarchs of Antioch, who exercised a nominal sway over this distant congregation, despatched under the guidance of Kennai Thomay, a wealthy merchant, a bishop, some clergymen; and four hundred and seventy two christian families to its relief; they were viewed with kindness by the reigning prince Sharum Permaul, who established them at Kodungaloor, readily protected their belief, and conferred on them some valuable immunities, and honorary privileges. So seasonable a succour raised the drooping spirits of the remnants of the faithful, thus patronized they rapidly increased in power and number. Antioch supplied an uninterrupted succession of bishops, who governed in spiritual concerns, till the arrival of the Portuguese in 1498. This people, who without the excuse, emulated the fanaticism of the early Mahomedans, tried every means of intimidation and persuasion to restore those heretics to the true faith, when their eloquence failed, force carried the necessary conviction, and the synod of Uddiumpayroor, under the guidance of A Lexis de Menzes, Archbishop of Goa, dictated the faith of the Syrians. The union of the churches continued from 1598 to 1653 when it was dissolved: an event partly hastened by the violence of the Portuguese to their unwilling converts, who no longer able to endure such a domination, vindicated the ancient creed, assembled a council at Aullungaad, and elevated an archdeacon (a descendant of one of the earliest ones consecrated by Saint Thomas) to the dignity of bishop. We shall not be surprised at the Syrians revolting from a faith that had been imposed by violence, but it is curious that amidst the persecutions to which they were subject, we never find

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them rising above remonstrance. The largest body of the Syrians however still remained attached to their new faith, nor was the discord that reigned at this period amongst the Syrian pastors, calculated to reclaim the remainder of the apostate flock, now so completely alienated that it seems most improbable they will ever return to their ancient belief. The people however are of a temper that might without much difficulty, be brought to acquiesce in the reunion, but their priests who view the most distant approach to it with alarm, would oppose with all their influence such a reformation.* A Code drawn up by the Syrians in 985 A. D. still continues to regulate the religious affairs of the Syrians, which their Metropolitan superintends. The connection with Antioch having ceased, this dignity has become heriditary, the nephew succeeds, celebacy being a necessary observance. The vicar of Veerapolly, or rather vicar general de propoganda fide at Rome, holds jurisdiction over a part of the Romo Syrian and Latin christians, another portion but more particularly the Catholic christians of the coast, are under the spiritual controul of the bishop of Cranganore, or as he is often styled vicar general of Malabar. This prelate is nominated by the archbishop of Goa, but his jurisdiction in no way extends to the other congregations. The Syrians may amount to about thirty or thirty five thousand souls,† the Romo Syrians may be estimated at perhaps double that amount, the Roman catholics composing the remainder, the rites of the Syrian creed are performed in 55 churches, 64 are dedicated to the Romo Syrians' form of worship; 182 consecrated to that of the Roman catholic, (Latin Ritual) making a total of 301‡ churches, a proportion greater probably than in most European countries, and one that would indicate a wealth and devotion now unknown; the numbers belonging to each church are of course various, on the average each congregation would amount to 372 souls. Christianity is fully acknowledged by the chief autho-

* The Ranee not long since directed the restoration of some churches originally Syrian to that congregation, however just the measure may have been, it created some alarm amongst the Romo Syrians, some of whose pastors being rather turbulent on the occasion, it was found necessary to admonish.

† It has not been found possible to ascertain the number belonging to each particular sect.—The total amount of the christian population in Travancore and Cochin is 155693, to this amount may be added about 10,000 as the probable number of the christians in the Company's territory south of the Punnany.

‡ The total number of Syrian churches including Cochin, some within the Company's boundary, is fifty nine, those belonging to the Romo Syrians including ten in the Company's district of Chowkad amount to 101 churches, while the churches belonging to the Latin Ritual are enumerated 250, making a total of 410 churches scattered over that portion of the western coast south of the Punnany river.

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rities in those countries, or whether from their justice or indifference does not appear to have been exposed to persecution. This liberal spirit seems to have been communicated to the christians (not always so much disposed to allow as require toleration) as in some instances we find the same church, belonging to different sects. It will be quite unnecessary to enumerate the articles constituting the creed, of those who here profess christianity, that of the Syrians coincides in the most material points with the tenets of the church of England; the other classes adhere to all the romish absurdities; but the ancient faith and practice of all is corrupted and disfigured by endless superstitions, of which they have borrowed largely from their pagan neighbours; external objects are necessary to kindle their devotion, the whole Pantheon of Saints and Martyrs (and they share too much of their homage) pictured in grim disorder over the walls of their churches stimulates their fancy or enlivens their zeal, and pleases (the Syrians are less indiscriminate in their devotion) a taste gratified with every sort of mummery. Their church festivals are regarded from temporal as well as religious motives and attract the devotion of numbers; many churches and shrines have a local privilege, and a pilgrimage to them is considered of great efficacy, amongst them may be particularly remarked that of St. Thomas at Mulliapur, its festival occurs at Witsuntide, when innumerable votaries crowd to present their adorations and offerings. The christians are scrupulous in observing the outward forms of worship, are constant in their attendance at church, where they display a piety, at least an attendance and decorum, that might teach a lesson to the more enlightened. The women too partake equally in this feeling, and display a similar concern in spiritual matters. Yet though interesting, religion sits lightly on them, as with the Hindoos, it is in some measure interwoven with the business of life, yet like them also it would appear to have but little influence on their morality, which cannot be rated at a very high standard. The religious establishments are still in Apostolic poverty, at least the state of delapidation * in which many of the churches are observed, would bespeak the insufficiency of the funds (sometimes diminished by the peculation of the elders) for the support of public worship. The revenue fluctuates with the condition of the flock, arising from voluntary contributions, fees on marriages, christenings, interments, &c. and Paudarum or per centage (seven and a half) on all dow-

* The religious buildings of the Syrians are observed almost always to be in a worse condition than those of the other sects, a circumstance difficult to say whether arising from a greater poverty or less active zeal.

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ries—The priests have no regular salaries, but participate in those fees, and their income increased by less direct means gives them enjoyments greater than most of their parishioners; real estate cannot be devised or made over to churches, but they may purchase lands, they however possess but little of this kind of riches, have no plate or valuables whatever, or indeed in most cases other property, than the few tawdry ornaments belonging to them.

However numerous the body of christians are, the other portion of the people evince no taste for their religion, although in its present state differing more in theory than practice from their own; at an earlier period it is said that the eloquence of St. Thomas, overcame even the bigotry of the bramins: a story, the truth of which their present opinions might lead us to suspect, was it not that many families are still pointed out and retain amongst them the tradition of being their descendants. With the apostle however has vanished the power of persuasion, as in other parts of India conversion and humiliation have much the same meaning, the indolence or prudence of the Syrians, leads them rather to avoid than seek proselytes, but even the more active zeal of the catholics, fond of increasing their numbers, meets here a scanty harvest, some few of the lower classes might be allured or persuaded, (not convinced) into conversion (as a spontaneous act it scarcely ever occurs) among the higher orders it would require an infinitely greater sacrifice, in consequence their scruple is almost insuperable.

The number connected with the church has not been ascertained, but they are tolerably numerous. The clergy are at present generally ignorant, some are taught Syriac, others Latin, (the language in which the liturgy of the different sects is performed) but so imperfectly as scarcely to comprehend what they read, and dreaming over the missal or legends of the saints, they display but little inclination to enlarge the circle of their accomplishments. They have few books, the laity none, and they require first to be taught to read before their distribution could be useful. But from this state of declension, the Syrians at least have a prospect of being raised, as a college (there was previously no seminary) has lately been founded at Kotium, for their instruction; this establishment owes its origin to the liberality of the Ranee, who has handsomely endowed* it. The metropolitan is at present aided or rather directed in his superintendence of this institution by some English gentle-

* It possesses a small tract of land near Quilon.

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men Missionaries: an advantage that promises the most important results. Indeed this appears the only manner in which their disinterested exertions could be useful. Travancore and Cochin present a fair field for their pastoral labours, but it is the business of education, not conversion, inculcating a more exalted devotion that shall unite morality with christianity, must be the best mode of promoting its interests, extending their ministration by communicating instruction (the arts of superior industry would be at present the most desirable lesson) cannot fail materially to advance those of the community. The formation of some parochial school, is one step towards the attainment of so desirable an end, but to render them of any efficacy, it is necessary that the same philanthrophy to which they owe their establishment, charge itself with guarding over and urging their progress.

There is a seminary at Verraupooly that educates the clergy of the Romo Syrian and latin churches, several schools are also scattered through the country, Pullypoorum, Pullingcoon, &c. &c, the establishment is under the superintendence of the vicar of the former place; but the instruction of this portion of the christian population was more particularly entrusted to missionaries of the Carmalite order, from de propaganda fide at Rome. That congregation however would appear indifferent as to the interest of this distant flock: a coldness of zeal with which it is not often chargeable. The clergy under the bishop of Cochin, have still less chance of improvement, there can scarcely be said to be any regular seminary for their education, which is in a great measure trusted to the parish priests, each of whom have one or two disciples, but no good can be hoped from such a tuition. The influence of the pastor, being often in proportion, to the ignorance of his flock, that of the Kuttanars is infinitely greater than their merits could deserve. To their spiritual, they join a limited temporal authority, arbitrating in temporal disputes, transgressions against the church are punished by reproof, or excommunication, but the road to reconciliation is not closed, this bar being removed on repentance. The practice of their pastors, however holds out a bad model for example. It must be confessed however, they have but few clerical honours to stimulate their exertions, to their ignorance they add a listless indolence, and a relaxed and pliant morality, difficult to reconcile with their precepts. They do not marry, the Syrians however are not enjoined celebacy, although they have observed it since the union of the churches, Menzes having denounced so uncanonical a custom on which (however encouraged to it) they have begun to infringe. The prohibition is pro-

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ductive here of its usual irregularities, and the priesthood have the reputation of indemnifying themselves liberally for the restraint imposed on them; they are not however diverted by those pursuits from the regular observance of their religious offices; but they adhere more to the minutiæ than spirit of religion, and hope to atone by the repetition of puerile ceremonies for the sacrifice of important virtues. The Syrian priests better educated, and not so turbulent, are either less dissipated or more prudent, and (though not deserving the praise of any great purity,) enjoy a higher reputation. Their garment a loose white gown or shirt, reaching to the knees; clerical tonsure and flowing beard (this only with the Syrians) distinguishes them from the people; their ceremonial vestments display a good deal of tinselled finery.

The christians it has been seen, constitute about one eighth * of the population, but they are of so varied a character, that it may be desirable to discriminate the materials of which this body is composed. The Syrian † share is split into two parts, the Pootuncoor ‡ or Syrians, Piencoor or Romo Syrians, both these classes are found scattered in the tract lying between the northern limits and Quilon, and constitute infinitely the most valuable share of the christian population. That portion of it who chiefly belong to the latin church inhabiting the coast must be ranked greatly below the Syrians; they consist in a great measure of Moocoos, or fishermen, whose ancestors, the Portuguese extending their religion with their power, have forced or persuaded into christianity. The Dutch may have been more judicious in its promotion, they at least have been less violent or less zealous, having made but few converts, and it is only in the district of Agust Eshwur, that we find a large protestant congregation: converts from the Shanaurs. They are under the spiritual direction of an English Missionary, as also are the few of that particular creed found in the vicinity of Alleepey.

The Nassarenes (the Syrians claim and deserve the high rank) are superior to any natives of India who profess christianity, they are of a mild tractable disposition, ignorant but susceptible of improvement, and free from prejudice, might perhaps in time be taught (could such an object be desirable) to adopt our manners, to which however theirs at present does not make the slightest approximation.

* But with reference to the extent of country, in which they are found they bear a much larger proportion.

† They are collectively known by the term Maupulays or Nussarene (Nazarines).

‡ In allusion to some distinction as to the elements used in taking the sacrament.

Partially at least free from the prevarications that characterizes the Nairs, they have an infinitely franker deportment, and seem capable of a more lasting attachment than them, if they have less capacity their greater integrity might argue the possession of superior virtues. Peaceable and valuable subjects, they return obedience for toleration and protection, nor would it appear they ever evinced symptoms of uneasiness at the control of the Nairs; accustomed to their pretensions, they willingly submit to their ascendency: a passiveness that does not accord with the martial spirit they are said to have possessed, but of which the character now exhibits as few remains, as their condition does traces of the higher consideration they are represented to have held at a remoter date. Whatever may have been their former situation, they at present rank below the Nairs, in estimation, but they are not subject to the humiliation that so often attaches to the profession of christianity in Asiatic countries. The Syrians are much disposed to commerce, but they are generally seen as cultivators, some possess considerable property, they are laborious from necessity, and to their industry many of the finest districts owe their fertility. There is little to indicate the gradations of society amongst them. Turragan is a distinction conferred on a few of the principal men, but the rank carries with it no authority, and but little influence. Their domestic ceremony need only be incidentally noticed, unlike the Nairs, the rights of filiation are fully acknowledged amongst them. The women are free from any sort of restraint, a singularity belonging almost peculiarly to this part of India. Marrying if possible at an early age, they are not chargeable with the dissolute manners of the Nairs, as regards the commerce of the sexes. Like the Nomboories the bride must bring a dower, which as also with them always forms an important preliminary in every connubial treaty, for passion has but little influence in dictating the union, this custom however has not the effect of frequently imposing celebacy on the females, whose relations consider it a duty to promote their marriage; the solemnities common to this occasion are performed in the church, always on sunday, and particular periods of the year are considered propitious. It is unnecessary to describe the ceremonies as they do not materially differ from those observed by Europeans, except only that the Tally is the symbol of union. The different sects do not often intermarry; divorces are unknown, as the church interposes its authority to reconcile family feuds—widows are permitted to remarry after the lapse of a year—children are baptized (all have scriptural names) on the 13th day. They lay great stress on consecra-

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ted burial. This feeling leads them to make charnel houses of their churches, almost all of which exhale a sepulchral odour, nor is the practice likely to be abolished as it is found profitable. The cost of interment is graduated by the distance from the altar, and the solicitude evinced to be laid near this sanctuary, would indicate that they thought it their best chance for salvation.

The exterior distinctions, amongst the Syrians, are subject to much variety, but carry with them few traces of the mixture of a foreign origin. They are generally of a better stature, and a more coarse and robust form than the Nairs, nor do we scarcely ever among the women, observe the delicate features and flexible figure common to them; some few of the more opulent however, are extremely fair, have a fine and more than ordinary marked expression of countenance. Cleanliness does not hold a place amongst their virtues, the dress of the men has nothing peculiar in it, they generally go bare headed, their black luxuriant but greasy locks floating to the wind, or tied in a knot behind. The female costume is more decorous than that of the Nairs, altho' they display no reluctance to copy their nudity. It consists of a cloth (white is the invariable colour) wound round the middle, fixed in several folds at the hip, and reaching to the knees forms a petticoat; the person is concealed by a jacket on which some finery is occasionally lavished by embroidering the seams; it falls loosely below the waist, the sleeves covering the arm to the wrist. They often however dispense with this garment for a less cumbersome vesture; necklaces of venetians, a cross, and silver rings round the ancle compose the ornaments of the more wealthy.

It will not be desired further to pursue the detail of their manners, which bear in much of their minutiæ a resemblance to those of the Nairs, to whom (more especially the Syrians) in the aggregate of personal qualities they are not perhaps inferior; ameliorating the condition of the christian population generally is an object of enlightened benevolence, and it might be expected equally from our sympathy, generosity and interest. They of course have shared in the equal justice which a better government has dispensed during later times to the other classes, and since a judicious policy has within the past few years, peculiarly distinguished them, they have been introduced to office. This innovation has contributed greatly to soften the prejudices of the higher orders, may be attended with still more important results, and as uniting their interests, must fix their attachment to a domination that has raised them from the oppression

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which they shared in common with lower classes of the community to a respectable rank in it. Of the other portion of the inhabitants who profess christianity, it is superfluous to speak, they belong to the very lower orders, and present no peculiarities to discriminate them.

Shogamars—The Shogamars, or Eleevars, are not of the Shuder tribe. To the south this class is known as Shanars, to the north as Teeans: denominations carrying with them but slight shades of distinction, all may be considered as applicable to the same race; they are found throughout the country but in large numbers along the coast, performing in fact the chief horticultural labours of the cocoanut plantations, and employed in the various manufacture of the products. Always engaged in the more active operations of rural economy, they never hold office except of the lowest kind, in fact are rarely seen in any character than ryots of some description or other, martyrs to the distinction of casts, the higher order treat them with supercilious scorn. Too poor to invite their rapacity, they hold them in bondage, at least their domineering temper awes them into a servitude mitigated to be sure when contrasted to that of the Prœdial Slaves. During late years this class has been raised in some measure from the state of degradation in which they were held, the repeal of an oppressive poll tax from which the lowest poverty could not exempt, the abrogation of the Ooloogoo or forced labour, and many vexatious inhibitions and restraints, may have taught them their own rights and given them confidence to claim them. There is of course considerable variety in their condition and character, towards the south, they draw their subsistance from the palmyra, and enjoy some local advantages. The Shanars, bear a resemblance to the people of the other coast, and are not distinguished by that passive ductility of temper, that marks the character of those belonging to the more northern part. In so large a body some will possess considerable property, but the numbers of even the moderately affluent are exceedingly limited. All are allowed to hold lands and gardens, but they labour not, possession constituting the principal share of the under tenantry, paying a rent that allows but little profit. In fact their soil rarely ensures them more than a hut, affording an insufficient shelter, and permits them to subsist or rather starve, throughout the year on cocoanut and fish. They are not remarkable as wanting intelligence, are indolent, harmless, tractable, and if deserving the charge of a timid pusillanimity, it must be ascribed to the state of vassalage in which they have been so long held. There are some distinctions of rank, each village has a Tundan, or principal of its

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Eeluvan population. The office is heriditary attended by some privileges, and exercises a domestic authority, which is extended over all the lower classes—to it belongs the investigation and decision of all controversies connected with caste expelling from which, and imposing small fines, is the limit of its power. The Tundan presides at all ceremonies, but the Punniken, a character of subordinate dignity, is more particularly their priest, his spiritual aid being necessary on all such occasions, while his secular exertions are directed to the education of the village youth.

Kunneans and Panans—The Kunneans, and Panans, are merely divisions of the Elewur tribe, the former derive the appellation from the science of divination, which some of their sect profess. The Kunnean, fixes the propitious moment for every undertaking and hysterical affections being supposed the visitation of some troublesome spirit his incantations are believed alone able to subdue it. Numbers are employed in making the chattries or parasols so generally used here. The manufacture belonging peculiarly to them, but agriculture is their more ordinary pursuit. As it is also that of the Panans, this class claims equality with the former one, from it are taken the musicians of the inferior orders, but to this profession they add that of players, pretend to a knowledge of medicine and the occult sciences. The two latter accomplishments are here generally united. A doctor being necessarily a musician, and almost equally skilful in both characters. The Panans, differ from all the corresponding classes in being married, and the children in every instance belonging to the father.

II.—*An Account of the Island and Bridge of Sivasamudram in the Cáverí River. By Rámaswámí Múdeliar, Jághírdár of the Island.* (Extracted from the Transactions of the Royal Asiatic Society Vol. 3. Part 2d.)

(*Communicated by the Madras Literary Society and Auxiliary Royal Asiatic Society.*)

Read 17th December 1831.

INTRODUCTORY NOTE,

BY

JAMES S. LUSHINGTON, ESQ.

Secretary of the Asiatic Department of the Madras Literary Society and Auxiliary Royal Asiatic Society.

THE materials for the following account of the island of *Sivasa-*

mudram, together with the description and plans of the bridges which have been built, and are now building across the two branches of the *Cáverí*, were furnished to me by Ramaswami Mudeliar, the intelligent and wealthy *Jághírdár* of the island. As regards the antiquities of this celebrated place, I regret the imperfection of the memoir; but I am willing to hope that it will not be considered wholly destitute of merit. By the curious in architecture, the faithful representation of the bridges, and the plain description of the manner in which they are constructed, will be valued; while, to the observer of the human mind, and the speculator upon the progress of improvement in India, it must be an object of interest to mark the modes of thought and feeling entertained by a Hindu, who, in strict accordance with the precepts of his religion, undertakes a great public work, which would do honour to the professor of any religion, and to the citizen of any country, in any age. With a view of exhibiting, not only Ramaswami's natural sentiments, but his manner of expressing them in the English language, I have made very few corrections in the composition of the memoir. The first part was less perfect in style than the last; but in it I have preserved the original language, with as few alterations as could possibiy be made, without leaving it in a state which would have shocked the ear of the English scholar. In the latter part, containing the account of his own bridges, where the subject-matter came home to his own business and bosom, and where, consequently, Ramaswami wrote with more ease and vigour, I did not find it necessary to make more than one correction, and that so trifling, that I may say the last part is presented to the reader in its original state.

It may here be proper to point out the inaccuracies into which Hamilton has fallen in describing the falls of the *Cáverí*. The height of each fall is much underrated; that of the *Gangana Chuki* being about three hundred and seventy feet, instead of from a hundred to a hundred and fifty feet; and that of the *Birra Chuki* about four hundred and sixty feet, instead of a hundred feet, as stated by Hamilton.

The Wellesley bridge at Seringapatam traverses the river in a winding direction. This tortuosity, it will be observed from a reference to the plans, is also the characteristic, in a much greater degree, of the bridges more recently constructed by Ramaswami,

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who derived the idea from observing the line of the ancient ruins still standing in the bed of the river; and, as he himself remarks, the manner in which his first bridge has stood against the severest floods, proves the excellence of the principle which he has adopted.

(Signed) J. LUSHINGTON,
Sec. Asiatic Department.

ACCORDING to tradition, the island of *Sivasamudram* is the most holy of places: it has its situation in a forest, and was the residence of the seven *Rishis* (or patriarchal sages) during the *Trétáyuga*, the second or silver age of the world. It is said, that as these *Rishis* or *Tapaswís* were once performing their ceremonies, two serpents, named TACSHACA and VASUKI, apprehensive of the attack of GARUD'ABHAGAVAN (or the divine bird and vehicle of VISHNU), came to these *Tapaswís* for protection, who offering them an asylum, obtained a promise from one of the serpents, that named VASUKI, that the people who should in future come to this place should not be exposed to the venom of his species. VASUKI having given this promise, the *Tapaswís* remained performing their devotions. It is said also that God appeared to VASUKI, and offered his protection upon the same promise; and as VASUKI was offering up his devotions to God, the seven *Tapaswís* came to visit God, and being alarmed at the earnestness of VASUKI's devotions, they also addressed their prayers to God with great fervency of spirit, until God granted them their desire, that no man should in future cast his eyes upon VASUKI until all apprehension from the serpents that should thereafter be generated on the island, should have ceased. God, moreover, directed VASUKI to live under ground, and only gave him liberty to come out at such time as he had to perform his *Pújás*. VASUKI accordingly lived in the *Pátálalóca*, and became a worshipper of RUNGASWAMI. While God was thus receiving *Pujás* from the *Tapaswís* and VASUKI, some *Brahmadévatás* and other devotees came also to visit him here daily, and perform their ceremonies.

It is farther said, that the moon having been cursed by God's priest upon some occasion, and deprived of her brightness, she prayed to I'S'WARA, and requested of him to allow her her full splendour; whereon he, favouring her with his presence, told her that she should go and make her devotions in the holy place called *Dandakáranium*

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(where the seven *rishis* and other devotees were passing their time in a holy manner), and assured her that he would appear to her there and fulfil her wishes, by restoring her to her brightness. The moon did as she was instructed, and performed her devotions, by which she obtained her wish. This circumstance of the moon's having obtained her full brightness, made a great impression on the hearts of all those who resorted to the island, so that they said, "That whosoever worshipped I'S'WARA in the name of SOMESWARASWAMI (or the lord of the moon) on that island, and would perform religious ceremonies, distribute alms, and perform the *tarpanams* (or ceremonies to their deceased relations), and feed the *Bráhmans*, would undoubtedly obtain the remission of all their sins, and would also meet with every prosperity and the enjoyment of their wishes, in like manner as the moon had been restored to her brightness.

It is said also, that while these *tapaswís* and other devotees were passing their time in offering their *pújás* in this holy place, one JAMBUCASURA, a giant, and of the sect of the great RAVANA, gave great annoyance to them, and they finding it a great interruption to their devotions, quitted the holy place and proceeded to the *Godávari*, which is to the north of *Dandakáraniam*; but a virtuous *tapaswí*, one of the seven *rishis*, seeing this, feared that the removal of these *tapaswís*, and other devotees from the island, would cause the place to become desolate; he therefore prayed earnestly to BRAHMA that the giant might be destroyed: whereupon BRAHMA appeared to him, and told him that RAMASWAMI would proceed to *Landcadwípa* to avenge him of his great adversary RAVAN'A, by way of *Dandakáraniam*, when he would appear to him, and his wishes for the destruction of the giant named JAMBUCASURA, would be fulfilled by RAMASWAMI's disguising himself in the shape of a woman and killing him. The other *rishis*, when first acquainted with the promise made by BRAHMA to the above *rishi*, were not quite satisfied, and put little faith in the promise, but BRAHMA once more appeared to them, and told them to fear nothing from the giant, for that God would not leave them, but reside on a tree there till the giant their enemy was destroyed. Thereupon the *rishis*, returning to the island, continued to perform their devotions; and while they were doing so, RAMASWAMI forthwith came to the island and destroyed the giant, to the great astonishment of all the *rishis* and other devotees: and after performing ceremonies to his deceased father in this holy place, went away. When they saw this, they glorified BRAHMA for the victory over the giant their enemy. The

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rishis after this lived in great tranquillity for a long period, and then passed away to the other world, from which time the island became desolate till TERUCHOLARAYEN discovered the place.

TERUCHOLARAYEN, of the *Cshatriya* caste, was a petty king of *Karaladésem*, on the Malabar Coast, who having by some accident fallen into the great sin called *Brahmahatyá* (slaying a Brahman), found it necessary, in compliance with the behests of the *S'ástras*, to proceed to the river *Cáverí* to expiate his sin, by performing devout ceremonies, building temples, and distributing alms. As he travelled in search of a place where he might accomplish his intended purpose, he came to the island of *Sivasamudram*, where the river *Cáverí* nearly terminates; and deeming it a suitable place, he settled himself there, and became the first king of the island. Here he exerted all his authority, and applied all his resources to the erection of temples, provided for the performance of daily *pújás* and ceremonies, and granted *agrahárams* to the *Bráhmans*. He also obtained possession of twelve other villages on the western side of the neighbourhood of the island. The population was at this time comparatively small and poor. In his reign the *Rangaswámí* pagoda was erected. These possessions were governed by him in peace about a thousand years ago; and after his death, VISHNUVARDHANEN, his only son, succeeded him, and ruled over the kingdom in peace till the day of his death, when he was succeeded by his son SRIRANGARAYEN. The reigns of these three sovereigns are supposed to have lasted about eighty years; and after the death of SRIRANGARAYEN, the island and its dependencies went to decay for a short time.

After a lapse of time, GANGARAYEN, a petty prince of *Umattun* in the district of Mysore, also of the *Cshatriya* caste, but of the sect of SIVA, is said to have visited the desolate island; and finding it quite in a ruined state, he took measures for its improvement, and built a fort with gates of brass, and a bridge on each of the branches of the *Cáverì*, by which the island is formed. He also repaired the dilapidated pagoda of *Rangaswámí*, and enlarged the ruined pagoda of *Sómés'waraswámí*, which is said to have been found on the island when TERUCHOLARAYEN, the first king, took possession of it. This prince is said to have committed suicide by plunging himself into the cataract which is formed by the western branch of the river. The following are said to have been the circumstances which led to this desperate act.

It is stated that in GANGARAYEN's reign a *chakler*, named UM-

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BAH, having discovered a root which had the quality of making a man invisible, ground it into a very fine powder, and mixing it with a little oil, made a mark on his forehead with the composition, which, causing him to be invisible, he formed the audacious design, and actually achieved the enterprize, of frequenting the table of GANGARAYEN, and feasting on the luxuries of the king's dishes. He continued to do this, it is said, for the space of about twelve long years, until, the consumption at the king's table on these days being unusually great, the queen observed it, and wished to know the cause of the extraordinary consumption. Having laid her plan, she one day made GANGARAYEN, bathe in a very warm bath, after which she had meals placed before him, all of which were very hotly seasoned, and caused him on eating to perspire a great deal. The invisible *chakler* being at the same time at the table partook of the same hot dishes, which causing him also to perspire violently, his enchanted mark dissolved and dropped off, when he was instantly discovered by the prince, and on being questioned who he was, declared the truth, and fell dead on the spot. The king finding that he was defiled by having eaten with a *chakler*, consulted the *s'ástras* which directed him, for the expiation of so great a sin, to plunge himself and his wife into the *Càverì*. In obedience to this mandate, he caused his favourite mare to be saddled, and taking his wife behind him, proceeded to the falls of the western branch, from the precipice overhanging which he leaped into the "roaring whirlpool" beneath. This fall has hence received the name of *Ganganachuki*, or the leap of GANGARAYEN, and the most perpendicular part of it is called, "*The Mare's-tail.*" This prince is said to have reigned about sixty years; and after his death, his younger brother, named NONACHI GANGARAYEN, succeeded him. He governed the country in the greatest tranquillity, supporting and encouraging, as his brother did, every devotional ceremony and charitable institution. After a short time, however, finding the possessions of his hereditary kingdom too small, he seized some districts belonging to the Poligars, *viz. Palliam, Singanellore, Bundahully, Hajipuram, Colligal, Muduganda, Jiraganellore*, and *Gundagalem*. He had a son GANGARAYEN, and a daughter named MINATCHAMA, who was given in marriage to ACHYUTARAYEN, a petty *Rájá* of a *Drúg* called *Kelemalay*, near the *Mudhalli Hills*. NONACHI GANGARAYEN reigned peaceably for the space of about forty years; and after his death, his throne was left to his son, who after a peaceable government of about thirty years, was dethroned by his brother-in-law ACHYUTA

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RAYEN. The cause of ACHYUTARAYEN's enmity against his brother-in-law, GANGARAYEN, was as follows.

It was a habit of MINATCHAM'A, ACHYUTARAYEN's wife, the sister of GANGARAYEN, to boast, in the presence of her husband, of her father's possessions; and among other things, she would talk in vaunting terms of the brass gates of her father's fort at *Sivasamudram*. One night in particular, as she was in bed with ACHYUTARAYEN her husband, she said to him, that she heard the sound of the brass gates of her father's fort closing. ACHYUTARAYEN, provoked at her remarks, the next morning besieged the town with all his troops. GANGARAYEN, apprehensive of a severe attack, and finding the bridges now unsafe, had them both broken down, by which means he was enabled to hold the island against the enemy for twelve long years; at the end of which time, they finding it still impregnable, bought over GANGARAYEN's confidential secretary, and through his treachery, ACHYUTARAYEN was enabled to enter the island with all his troops through a secret pass. GANGARAYEN, on discovering this treason and its fatal effects, collected the whole of his family and relations together into the castle, and entering himself last, sprung a mine which had been prepared, and with all his family was buried in the ruins. When ACHYUTARAYEN entered the city, and witnessed the dreadful scene of havoc in the palace, of which he had been the cause, he was immediately struck with remorse, and returned to his own possessions. But one of the *Sardárs*, a Musselman, established himself in the island, and kept possession of it for about fifteen years; at the expiration of which time, as he was one night going through the streets of the city, he was attacked by a seven-headed *cobra da capella*: as soon as he saw it, he attempted to strike it, but the serpent spitting forth his venom, laid him dead upon the spot. After this, the island becoming a dependency of the Mysore territory, was scarcely inhabited, and went to utter decay. All these sovereigns were worshippers of RANGASWAMI and SOMES'WARASWAMI.

Account of the Island since it came into Ramaswami's possession.

I first visited the island in the year 1805, in attendance on Colonel WILKS, then British Resident at the court of Mysore; and it was at that time the abode of tigers and other wild beasts, the jungle being almost impenetrable, and all the buildings were in a state of utter ruin.

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The restoration of the island to its former sacred and charitable purposes, had long been the subject of my anxious thoughts ; and accordingly, in the year 1818, I made proposals to Government, the conditions of which were, that the island of *Sivasamudram* being given over to me and my heirs in perpetuity, together with a tract of jungle land, purposed to be occupied by inferior castes, I undertook to clear the island of the jungle, to erect a wooden bridge on the eastern branch of the *Cáverí* from the Coimbatoor side to the island, to build a bungalow for travellers, and to restore some of the religious edifices.

My proposals were accepted ; and in the year 1819 I made preparations for these arduous undertakings. From further inquiries, and after due consideration, I was of opinion that a wooden bridge would neither be lasting nor safe ; and I accordingly determined, without applying for any additional remuneration, to construct an edifice of permanent materials. The site of an old bridge was pointed out, and I resolved to erect the new one at this spot, and on the same principles of construction as the former appeared to have been.

The edifice was accordingly undertaken, and completed in the year 1821, according to a plan, a copy of which accompanies this memoir.*

The clearing of the island, and other works which I had undertaken to execute, proceeded at the same time with the construction of the bridge ; and the difficulties which I had to encounter were greater and more numerous than I am able to detail. The climate of the island and surrounding country presented an obstacle hardly to be overcome ; very many of the work-people, all of whom were brought from a distance, died from fever and dysentery ; others were obliged, after having been attacked by sickness, to seek recovery elsewhere ; and not a few deserted the works from the fear of the diseases, which they saw making such sad havoc among every description of workmen.

To all of them I had been under the necessity of making advances of money ; and my losses from their deaths, sickness and desertion, were very great. The rates at which all my people were paid were necessarily high ; and being also obliged to provide them with food, and comforts of all kinds, my disbursements were far beyond

* This will account for the want of perspective in the plates. See Plate 1.

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all my previous calculations, and my trials and vexations were almost too great for endurance.

Having however undertaken the task from a sense of religious and charitable feeling, and also with a view to public utility, I persevered, and I have at length the happiness to think that I have succeeded in many of my objects, although at a pecuniary expense of a much greater extent than I could have contemplated.

The jungle has been in a great measure removed, and little is now to be apprehended from the climate of the island. The wild beasts have been driven to seek other resorts, and the present colonists of the island are healthy and cheerful. The soil of the island is bad, being rocky and full of loose stones, but cultivation is carried on to a certain extent; and although its continuance must be at much pecuniary loss to myself, it will be persevered in.

The ancient edifices of religion and charity have been rebuilt and restored, and new ones have been erected.

Hitherto the public utility of the bridge (which has been named the *Rámshatuva*) has been small, as it has only been used by those who came to visit the sacred and charitable establishments on the island; but the benefits which will be hereafter derived from it, when the bridge now under construction on the western branch of the *Cáverí* shall have been completed, may be considered incalculable. By these two bridges, the communication to and from the possessions of the Honourable Company and the territories of his Highness the Rajah of Mysore will no longer be difficult; and the merchant and traveller will not hereafter be liable to the dangers which have attended the passage of the *Cáverí* in the unsafe basket-boats, nor to the inconvenience of detention on the banks of the river, when the passage, from its extreme rapidity and great depth, could not be attempted in such a conveyance.

I had for some years been anxious to see this communication established; and when the Right Honourable the Governor last year paid the island and this part of the country a visit, I took the liberty to express my opinions and wishes to his Excellency. I was in consequence directed to submit my plans and proposals; which I accordingly did, for the consideration of the Madras Government, and of his Highness the Rajah of Mysore, in the month of September 1829.

My proposals were, that in consideration of certain additional grants of land from the Honourable Company, and from his High-

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ness the Rajah, and being allowed to levy certain transit duties on merchandize, being half of what is now paid to the boat people, I undertook to erect at my own expense a bridge on the western branch of the *Cáverí*, of the most solid materials, and as soon as might be practicable.

The new bridge which, as a tribute of gratitude and respect to the Right Honourable the Governor, I intend shall be denominated, " The Lushington Bridge," is already considerably advanced, and if nothing extraordinary occurs to retard its progress, will I hope be finished in the course of next year, or early in 1832. A plan of this bridge, shewing also the progress made in its erection, accompanies this memoir.*

It will be seen that neither the *Rámashatuva* Bridge, nor the one under construction, is carried in a straight line across the river. Trusting to the skill and judgment of the ancient projectors of the former bridge, I followed the site upon which it appears to have been erected, and I have every reason to be satisfied of the propriety of the resolution which I adopted. The shape is certainly not a common one, but it seems better adapted than any other to the situation. When the river is full, the great body of the water in this branch runs in the centre of the bed ; to this the angle of the bridge is opposed, and the force of the stream, which is very rapid, is thereby broken.

The best proof, however, of the excellence of its form and structure is, that it has withstood the violence of repeated floods without sustaining any other than trifling damages, which were easily repaired. The original parapet of the bridge was of solid masonry ; but a part of it having been carried away by a great rise of the river, the whole was taken down and replaced by a wooden railing.

The length of the *Rámshatuva* Bridge is one thousand feet, the breadth of the roadway thirteen feet, and the height, including the foundation, is twenty-three feet. It is supported by four hundred pillars, which form a hundred and thirteen *chesmas*, and the stones forming the roadway are not let into sockets, but fastened to the pillars with iron pins and mortar.

The foundations are either cut into the solid rock, or into immense stones placed for the purpose, and in many places to the depth of five feet.

I am not prepared to state, with any thing like precision, the sum

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* See Plate 2.

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which this bridge cost me. The other works I had undertaken were proceeding at the same time, and I have briefly alluded to the causes which rendered the expenditure of money enormous. I was afflicted, not only with mental vexations, but my bodily health also suffered severely. I had repeated attacks of fever, which obliged me to leave the island, and to commit the superintendence of the works to servants, who neither could nor would exercise that strict vigilance over the labours of the work-people, which the peculiarity of the situation required.

The bridge was valued in the year 1823, by an officer of engineers, at 60,000 rupees. I am not acquainted with the data upon which the valuation was made, but I consider it greatly lower than it ought to have been; and I conceive myself borne out in this observation, when a comparison is made between the structure at this island and the Wellesley Bridge at Seringapatam.

This last-mentioned edifice was constructed under the orders of PURNIA, the celebrated *Diwán* of Mysore, who had of course all the resources of that government, as well as the skilful artificers and numerous labourers of Seringapatam, at his command.

The rates of hire and the prices of materials must, therefore, have been moderate: and yet it is well known that the Wellesley Bridge cost between seventy and eighty thousand *Canteroy* pagodas, or upwards of 2,10,000 rupees. The Wellesley Bridge is on the same principles of construction as the *Rámshatuva*; the former has a broader roadway, but it is not more than two-thirds of the length of the one constructed by me at this island. The highest of its pillars are from twelve to fifteen feet, while in the *Rámshatuva*, there are many from eighteen to twenty-one.

When the difficulties which attended the erection of the bridge at *Śivasamudram* are considered, with the facilities with which the Wellesley Bridge was built, I may without fear assert, that the valuation estimate of the former should have greatly exceeded the sum stated by the officer of engineers.

In concluding this memoir, I may be permitted to dwell with some degree of vanity and self-satisfaction on the works which I have already accomplished from my own resources, and without the aid of one rupee from the public. I have to reflect that I have been the means of restoring to my countrymen access to a place and its religious buildings, held sacred from time immemorial. That I have, by perseverance, rendered lands habitable which were formerly the

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resorts of ferocious animals only. That when the bridge on the western branch of the *Cáverí* shall have been completed, I shall have been the instrument of opening communications which had long ceased to exist, to the trader and the traveller; that the lives of man and beast will no longer be endangered in the passage of the rapid and deep *Cáverí*; and although I might enumerate many other public advantages which have been, and will be derived from my exertions, I shall only further allude to the facility which now attends the visits of the curious to the celebrated falls of the *Cáverí* on each of the branches, by which the sacred island of *Sivasamudram* is formed.

Finally, I may claim the merit of disinterestedness. I have shewn at how great pecuniary sacrifices and personal vexations and trouble the works have been perfomed; and I have no prospect of future recompense, nor do I ask any. The island of *Sivasamudram*, and the tract of jungle granted to me on the original agreement, were rated in the books of the Collector at 4,840 rupees per annum; whereas, when I took charge of these grants, they did not yield to government a revenue of a hundred rupees a year; even now, when a great part of the jungle has been cleared, both on the island and the tract above-mentioned, I do not receive from them more than eight hundred rupees per annum, which may be increased, when the jungle is entirely removed, to one thousand eight hundred rupees.

My monthly disbursements for charitable purposes,- the expenses of the pagodas, and on various other accounts, are not less than six hundred rupees, and the expenditure can never be less, while the several establishments of the island are kept up.

(Signed) T. RAMASWAMI,
Jághírdár.

Sivasamudram, Oct. 26, 1830.

III.—*An Historical account of the Christians on the Malabar Coast, by the Venerable Archdeacon Robinson,* A. M.

PART 2D.

(Continued from the 13*th page of our last Number.)*

Before we proceed to the narrative of events which followed the arrival of the Portuguese among the chsistians of St. Thomas, it will be useful to say a few words of their ecclesiastical dependence at that period. I follow with slight variations the narrative of La Croze and Geddes.

Gouvea, the Portuguese historian, relates in accordance with the tradition of the country, that on the destruction of Meliapoor, the

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Indian churches had no other ecclesiastic than a single deacon, whom they compelled to administer the Sacraments, as well as the other offices of religion, until they were supplied with a regularly ordained clergy. They sent accordingly to the church of *Babylon*, then famous for its learning and piety, and obtained from the Patriarch three bishops, one for themselves, one for Socotra, and the third for southern China. Two of these prelates, on their arrival at Cranganore, were disgusted with the country and returned. Whether *Seleucia*, or *Bagdad*, is intended by *Babylon* in this passage, is doubtful and therefore the time of this event is left uncertain. But t appears that the christians of Malabar, always gave their primate the title of Patriarch of Babylon,* which is founded on the antiquity of the city of *Seleucia*, which according to the testimony of Sozomen, was from the 4th century, the residence of the bishops of Persia, the primates of India, and which was antiently called *Babylon*, according to the testimony of Stephen of Byzantium.

"Under the reign of the Caliphs (says Gibbon,) the Nestorian church was diffused from China to Jerusalem and Cyprus. Twenty-five metropolitans, or archbishops, composed their hierarchy, but several of these were dispensed, by the distance and danger of the way, from the duty of personal attendance, on the easy condition that every six years they should testify their faith and obedience to the Catholicos or *Patriarch of Babylon*, a vague appellation which has been successively applied to the royal seats of *Seleucia*, *Ctesiphon and Bagdad*. These remote branches are long since withered, and the old Patriarchal trunk is now divided by the *Elijahs of Mosul*, the representatives almost in lineal descent of the genuine and primitive succession, the *Josephs of Amida* who are reconciled to the church of Rome, and the *Simeons of Van or Ormia*, whose revolt at the head of 40,000 families, was promoted in the sixteenth century by the Sophis of Persia." Gibbon viii. 345.

At what time these churches received the Nestorian heresy,† it is impossible to determine; probably in the early part of the sixth century, when the Nestorian clergy were sole masters of the Persian church,‡ and would of course diffuse their doctrine throughout their dependencies in the East. Certain it is that when the Portu-

(*) It is plain from the 33d of the Arabic canons of the Council of Nice (which tho' not genuine are very antient and of great authority) that the church of *Seleucia*, or *Babylon*, was antiently subject to the *Patriarch of Antioch*, who of all the Patriarchs, was their nearest neighbour. See Geddes page 16, and Gibbon viii. 339 note.

(†) For a full account of the doctrines of Nestorians, condemned by the 3d general Council (of Ephesus. A. D. 431.) See Mosheim's Eccles. Hist. 1. 40. &c.

‡ Gibbon viii. 341.

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guese arrived amongst them, there was not a vestige of any other faith.

The first notice which Europe received of the christians of St. Thomas, after the revival of learning, was from *Pedro Alvares Cabral* or *Cabrera*, who commanded the fleet of Emanuel, king of Portugal, in the year 1500. In his war with the Samorin, he met with several of these christians, and two of them, brothers, accompanied him to Portugal. The eldest, Matthias, died at Lisbon; the younger, Joseph, went from thence to Rome, and afterwards to Venice, where an account was published, from the information he furnished, of the church of Malabar, which is found at the end of *Fasciculus temporum.*

On the arrival of *Vasco de Gama* at Cochin in the year 1502, the christians of St. Thomas, hearing that he was sent by a christian sovereign, solicited by their deputies the protection of the king of Portugal against the oppressions of the heathen Princes, and received from the admiral the assurances of his friendship. From that time till the year 1545 no mention is made of them in the transactions of the Portuguese, who were too much occupied with securing and enlarging their conquests, to attend to the wants of a poor and defenceless church. "But (as Geddes well remarks), the Portuguese's negligence in this matter was nothing so scandalous as the violences they afterwards made use of in the reducing of them.*"

The first Missionaries, who laboured among them were Franciscans; one of whom, called *Fre Vincent*, had accompanied Don John D'Albuquerque, the† first bishop of Goa, who was also of that order. He established himself at *Cranganore*, where he built churches in the European style.‡

This Missionary however, not being supported by the secular arm of the authorities of the place, made little progress, and therefore begged the Viceroy of Goa to found a college at *Cranganore*, where the Indian youth might be educated in the learning and discipline of the church of Rome; in order that, in process of time being admitted to the priesthood, they might bring their nation under the authority of the Pope. The Indians, sent their children for education to the college; but when they were ordained, they would not admit them into their churches, altho' they had previously admit-

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* Page 6. † A. D. 1545.

‡ La Croze says that the antient churches of Malabar scarcely differed in form from the heathen temples. I know not on what authority this assertion is made. There seems no ground for it.

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ted the Portuguese clergy. In this they followed their antient canons, regarding the Potuguese with the courtesy due to strangers, but their children, who had embraced the ritual of the Latin church, as apostates from their own.

The Jesuits seeing the failure of the Franciscans, formed a wiser expedient for the attainment of the same object. They obtained funds from the king of Portugal* for a college, which they founded at *Vaipicotta* at the distance of one league from Cranganore, where there was an antient christian population. There under the auspices of the viceroy of Goa, and with the permission of the king of Cochin, they instructed the children of the christians in the Syriac language. This Institution, though in some measure it promoted their views, did not produce all the effects they anticipated; for the Indian youth whom they educated, when ordained, did not presume to preach against their own prelates, and the Jesuits had the mortification of hearing them, even within the walls of their college, support their old opinions, and retain the name of the Patriarch of Babylon in their liturgy.

The Portuguese, seeing the little effect of the measures hitherto pursued, determined to sieze the Syrian bishop, and send him to Rome for the double purpose of effecting his conversion from the errors of Nestorius and leaving the churches of Malabar more open to the instruction of their missionaries during his absence. This bishop was called *Mar Joseph*, and had been consecrated by Mar *Ebed Jeshu*, the patriarch of Babylon, who had assisted at the council of Trent in the year 1562. He was arrested at Cochin, and carried to Goa to give account of his heretical opinions, from whence he was sent to Portugal. At that court however, he was received with great kindness by the Queen, (Catherine) who sent him back to India with letters of recommendation to the authorities of Goa, desiring that he might be left in peaceable possession of his diocese.

In the mean time, the christians of Malabar, seeing themselves thus deprived of their bishop, and uncertain what might be the issue of his voyage, wrote to their patriarch *Mar Simeon*, and entreated him to send them another. He complied with their request, and Mar Abraham, whom he ordained and sent on this service, arrived on the coast in disguise, to the great joy of the whole church. While he was administering holy orders, and exercising the functions of his office, Mar Joseph returned from Portugal, and though regarded with suspicion by the archbishop of Goa, was by virtue of

* Geddes says that it was built at the sole charge of *Antonio Guedes Morales. History of the Church of Malabar*, page 11.

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the Queen's letters, suffered to resume his office. The church was divided into parties by the two rival bishops, and Mar Joseph appealed for protection to the archbishop of Goa. Mar Abraham was accordingly siezed by his order and sent to Goa, where he was put on board a vessel bound for Portugal. The ship however touching at Madagascar, he there made his escape, and went to Mosul with a view of obtaining fresh orders from the Patriarch and returning to India. Fearing however that the influence of the Portuguese would never leave him in repose, he took the hardy resolution of going at once to Rome, where he arrived under the pontificate of Pius IV. The Pope compelled him to make a new confession of faith, and to promise the entire reduction of this church to the Roman See; and the Eastern forms of ordination being different from the Romish ritual, he decided that Mar Abraham had never been properly ordained. He obliged him therefore to receive the several orders, from the tonsure to the priesthood inclusive; and then having enjoined the Patriarch of Venice to consecrate him bishop, he sent him back to India, with a brief addressed to the viceroy and the bishops directing them to acknowledge him as bishop of Angamale. The records of all these transactions, were in the time of Gouvea in the church of Angamale, then the cathedral church of Malabar.

Mar Joseph, during the absence of Mar Abraham, enjoyed all the prerogatives of his office, and continued to preach the doctrines of Nestorius, in violation of his engagements both at Goa and Lisbon. The archbishop of Goa and the bishop of Cochin wrote to the Cardinal Don Henny, who obtained from the Pope, (Pius V.) an order to the archbishop of Goa, to make strict enquiry into the charge of heresy and if he were found guilty, to send him immediately to Rome. He was accordingly siezed and sent to Portugal, and from thence to Rome, "where (says Gouvea) *he ended his days*."

Mar Abraham arrived at Goa a short time after the departure of Mar Joseph, but was received with great suspicion by the Portuguese, and confined in the Dominican convent. He contrived however to make his escape, and went to his own church, where he was received with transports of joy. He re-ordained those whom he had formerly ordained, apparently in obedience to the decision of the Pope regarding the invalidity of his own consecration, but he still continued to preach the errors of Nestorius and suppressed the name of the Pope in the public prayers, inserting only that of the Patriarch of Babylon. Gregory the XIII, at the instance of the archbishop of Goa, addressed a brief to him dated November 28, 1576, enjoining him

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to preach the catholic doctrine and to attend the provincial councils assembled at Goa, and to observe all the decrees which might then be made for his diocese. In consequence of this letter he attended the third provincial council assembled by Don Vincent de Fonceca, archbishop of Goa, and made a new confession of faith, to which he added (if we may believe the Portuguese historian) a formal renunciation of his errors, and bound himself to obey the decrees of the council, and to deliver up to them all the heretical books in his diocese, in order that they might burn some and correct others. The council finding that in his ordination of priests, he put no wine into the calice when he placed it in the hand of the candidate, pronounced the ordination null and void, and obliged him to re-ordain them in the presence of two Jesuits from the college of Vaipicotta. So that these priests were ordained, three several times!

Sometime after the council, Mar Abraham, apprehending that his Patriarch would be offended at his proceedings, wrote a letter to him informing him that he had attended the council of Goa, from fear of the Portuguese "*who were as close upon his head as the hammer upon the anvil*;"—and that he had carried with him his confession of faith, which was highly applauded by the bishops. This letter was intercepted.

His apprehensions of the displeasure of the Patriarch, appear to have been well founded, for about this time a Syrian arrived in Malabar, named *Mar Simeon*, who gave out that he was sent by the Patriarch of Mosul to succeed Mar Abraham. The whole diocese was thrown into confusion by the parties, and mutual excommunications of the two prelates, Mar Simeon being supported by the Queen * of the country at carturte, and Mar Abraham by the Portuguese, to whose protection he appealed. After some time however Simeon was pursuaded by some Franciscan Missionaries, in the interest of the opposite party, that he would never be secure in the possession of his dignity, till he obtained the sanction of the Pope. He therefore went to Rome, to solicit it; and Sixtus V. the reigning Pontiff, according to Gouvea, finding on examination that he was a Nestorian, that he was not a bishop, and that there was no proof of his being even a priest, obliged him to recant his errors, and confined him in a monastery, till he should be instructed in the Catholic doctrine. The sentence, pronounced by the Pope himself, declared that he was not a bishop, and forbade him to exercise any episcopal function, or even to celebrate Divine Ser-

* Called by the Portuguese, *Rainha de Pimenta.*

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vice. The principal reason of this sentence according to Gouvea, was a letter which Mar Simeon had written to the Patriarch of Mosul, and which had been intercepted by the Portuguese. He there represented to him that on his arrival in India, finding the authority of the Patriarch so weakened, the bishop of the Malabar so infirm, and the Portuguese so determined to overthrow the rites and doctrines of the Syrian churches, he thought he was rendering a service to God by assuming the title and exercising the functions of bishop, in order to preserve the authority of the Patriarch. He therefore entreated him to confirm the orders which he had given, and to send him letters, declaring him archbishop of the christians of Malabar. Such is Gouvea's account, but it is difficult to give implicit belief to so partial and prejudiced an historian; and the more natural interpretation of the letter is that Mar Simeon had been consecrated without a title, (as is common with the oriental churches) and sent by the Patriarch to enquire into the disorders of Malabar; that finding that they required a prompt and immediate remedy, he assumed the government of the church, and requested the Patriarch now to confirm what he had done and to send his *Sustaticon* or letters patent, for the legal possession of the diocese.

From Rome Mar Simeon was sent to Portugal, and confined in the Franciscan convent at Lisbon. From thence he wrote every year to the churches that recognized his authority in Malabar, and particularly to a Catanar, or Priest, named Yacoob, whom he had appointed his vicar general. These letters, in which he styles himself Alexis de Metropolitan of India, contain all the errors of Nestorius. Don Menezes finding one of them when he visited Malabar in 1599, sent it to the Inquisitor General at Lisbon. After this we hear no more of Mar Simeon.

His rival was now left in full possession of the See, though Yacoob, the vicar general of Mar Simeon, refused to own his authority. Don Matthias, archbishop of Goa, held at this time (A. D. 1590) the fourth Provincial council of India, and summoned Mar Abraham according to the brief of Gregory XIII. but that prelate feared to trust himself a second time to the good faith of the Portuguese, especially as he had not adhered to the promises that were extorted from him in the preceding council. To every summons he answered in the words of an Arabic proverb—*The cat that has once been bitten by an adder, is frightened even at a string.*

The Portuguese having informed the Pope (Clement VIII.) of the refractory conduct of Mar Abraham, obtained a brief, addressed to the famous Don Alexis de Menezes, then newly appointed arch-

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bishop of Goa, enjoining him strictly to enquire into the life and doctrine of that prelate, and if he found him guilty of the charges brought against him, to send him to Goa under a sure and honorable guard, and to transmit to Rome authentic copies of the proceedings, in order that the holy See might form an exact and precise judgment.

To prevent however any evil to the diocese of Angamale, either in spiritual or temporal matters, the Pope directed the archbishop to appoint, a vicar Apostolic, who should if possible be well acquainted with Syriac, and that in future no prelate should be admitted to that diocese who was not elected by the holy See. This important document, on which were grounded all the subsequent persecutions of this unfortunate and injured people, was dated from Rome, the 27th January 1595.

Don Alexis de Menezes, on his arrival in India, transmitted a a proces verbal to Rome of the information required. But the great age and infirmity of Mar Abraham, which confined him entirely to his house in Angamale, prevented him from securing his person. Learning however that the church had written to the Patriarch of Mosul to send a new bishop, he sent orders forbidding the Portuguese at Ormus under pain of ecclesiastical censure to allow any priest or bishop of Chaldea, Persia, or Armenia, to pass into India. This order compelled the new archbishop, who had received the letters of the Patriarch and was waiting at Ormus, for a passage, to return to Persia. The strictest search also was ordered of all Syrians and Armenians who might arrive in any Port of India.

In the mean time Menezes, in order to check the schism that prevailed in Malabar, wrote to the Catanar Yacoob, the vicar General of Mar Simeon, commanding him to submit to the authority of Mar Abraham. The priest refused to obey, and continued his factious conduct and heretical doctrines. He wrote also several letters to Mar Abraham, and to his archdeacon, (the only ecclesiastical dignity in his diocese) exhorting them to retract their errors, to give up their Nestorian manuscripts, and to submit to the Romish church. The aged bishop replied to these letters with frivolous excuses in order to gain time; and the manner of his death, which happened shortly after, proved that he retained his former creed unchanged.

Menezes, was engaged in a visitation of his own diocese of Goa. when he received the news of Mar Abraham's death, and was unable to escape from his more urgent and immediate concerns to undertake in person the enterprize that was nearest to his heart—the complete reduction of the church of St. Thomas to the authority

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of Rome. As the first step however in obedience to the Pope's injunctions, he nominated *Francis Roz*, a Jesuit of great learning, and well skilled both in Syriac and Malayalim, vicar Apostolic of the diocese. The council of Goa disapproved of this nomination, as likely to disgust the church of Malabar, and recommended the appointment of the archdeacon George, whom Mar Abraham, at his death had left in charge of his diocese, and who was universally respected and esteemed. Menezes, in accordance with their suggestion, sent the archdeacon a new patent, appointing him vicar general, but giving him two associates in the office, Francis Roz, and the Rector of the college of Vaipicotta. In the same letter, he ordered him to make before the Rector of the college, a solemn confession of faith according to the council of Trent, together with the oath contained in the bull of Pius IV. The archdeacon objected to the appointment of any associates in his office, and Menezes yielded the point and sent him a new patent, appointing him sole vicar general, with no other condition than the confession of faith. The archdeacon received the patent, but declared that without it he was in full and lawful possession of his charge, and deferred the confession of faith, to Thursday in Passion week, ostensibly in order to make it more solemn, but really in the hope that before that time a new bishop would arrive from Mosul.

The appointed day however being come, the archdeacon declared boldly that he would not make the confession of faith demanded of him, that he did not recognize the church of Rome as having any thing to do with that of St. Thomas, and that he would never submit to the archbishop of Goa as his superior. He convoked an assembly of the priests and chief persons of the nation at Angamale who resolved that in all matters of faith, they would do nothing without the consent of the archdeacon; that they would suffer no innovation of the antient usages, that they would never suffer the law of St. Thomas to be destroyed, nor even admit any bishop into the diocese but those who come to them from the Patriarch of Babylon. They swore to maintain these articles at the peril of their property and lives, and published their resolution throughout the diocese.

From that time, they no longer suffered the Portuguese priests to officiate in their churches, as they had done before, nor the Jesuits of Vaipicotta to preach amongst them.

A. D. 1597. Menezes, alarmed at the news of this insurrection, resolved immediately to visit the diocese, and was only prevented from executing his plan, by a war which broke out between two

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of the chief Rajahs of the coast, which rendered the journey dangerous, and interrupted all intercourse of christians. Forced by these circumstances to defer his expedition, he wrote to the archdeacon and to the church, that he was on the point of visiting them, but that, for weighty reasons, he should defer his journey to the following spring; and that in the mean time the archdeacon should make his public confession of faith as he was pledged to do, that he should give up all the Syriac books in his diocese, of whatever nature they were, to be purified and corrected, and lastly that he should bring all his people into subjection to the church of Rome.

The archdeacon was alarmed and began to temporize. He declared that he was ready to make the confession of faith before persons of any other order, but that he had reasons to complain of the Jesuits. Menezes however, was entirely governed by that Order in the whole conduct of his expedition to Malabar. They had already fixed on the Episcopal dignity as the object of their ambition, and they obtained it by the credit and connivance of the archbishop. They enjoyed it subsequently, as we shall see, till the christians, weary of their avarice and their tyranny, rose *en masse* against them, and thus depriving the Jesuits of so honorable and lucrative a post, contributed not a little to the conquests of the Dutch, and the expulsion of the Portuguese from that coast.

Menezes was firm in his demands, and several circumstances that occurred at this time tended to widen the breach between the two churches. He sent a Franciscan Friar, who had brought him letters from the archdeacon, to receive publicly his confession of faith, and to send it to him to Goa in Malayalim. The archdeacon, intimidated by his threats, consented to make a confession of faith, provided he were not forced to make it publicly, lest it should be thought that hitherto he had not been orthodox. He made accordingly a sort of confession of faith in private before the Franciscan, and sent it to the archbishop. Menezes was exceedingly displeased with this document, because it was neither public, nor in the form prescribed by Pius IV; because the archdeacon had contented himself with saying that he was a Catholic, without abjuring the errors of Nestorius; because he professed to believe in the Holy Church without adding the word *Roman*; and because he declared the Pope to be the Pastor of the church, without saying that he was the *universal* Pastor of the whole church of Jesus Christ.

This confession not being admitted, the Franciscans determined to extort another which should be more acceptable. They therefore proposed to him to meet them at Vaipin in the immediate

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neighbourhood of Cochin, and to comply *publicly* with the archbishop's wishes.

The archdeacon, in the hope that his compliance would prevent the visit with which Menezes threatened his churches, promised to do all that was required of him. He attended on the day appointed, and being seated on a chair prepared for him in the presence of the Governor of Cochin, accompanied by many, both of the clergy and laity, a Portuguese priest read to him the confession of Faith in Portuguese, demanding of him if he believed all that was therein contained. The archdeacon, who did not understand Portuguese, answered in the affirmative without hesitation ; and the same when they asked if he acknowledged the Pope as the head of the church and the archbishop of Goa as his superior. The Portuguese (adds La Croze from whom this whole narrative is taken) received this confession with great expressions of joy, but the Jesuits, who were within hearing, judged very differently. Menezes who received from Vaipicotta a full account of the whole transaction, resolved, notwithstanding the wars of Malabar and all the other inconveniences that oppposed him to visit the churches of St. Thomas without delay and to reduce them finally to the obedience of the Holy See. The narrative of that expedition must be reserved for a subsequent communication.

To

The Editor of Journal
of the Madras
Literary Society.

IV.—As frequent notices have been made regarding the Earthquake, which occurred on the 26th of last August, the vibrations of which were experienced over an extensive range of country in Bengal, and as several queries have been submitted for consideration as to the cause of earthquakes generally and locally, I have been induced with the view of contributing my mite, in support of the Madras Journal, to offer the following brief outline, in which no profession is made of furnishing any original illustrations, my only object being to arrange various established truths drawn from the latest authentic sources of geological knowledge, in a condensed form adapted to the limits of a periodical publication.

B. W. WRIGHT,
Asst. Surg. 8*th Regt. N. I.*

Vizianagram, 28*th Octr.* 1833.

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The theory of the subterranean movements being so intimately blended with that of the whole terrestrial system, it appears advisable to consult various works on the formation and revolutions of the earth, ancient and modern. In these it will be found that a vast accession of knowledge, has been gained from modern physical and geological discoveries, geologists having of late years explored many mysteries, the structure of the earth being surveyed minutely and in detail, the organic inscriptions of its different strata being carefully examined, and comparisons made, facts have been ascertained, beyond the reach of former philosophers, each of whom had a creed of his own considered supreme, their system being essentially dogmatic, having entirely disregarded the Mosaic account of the creation, the only certain foundation to build upon. Werner and Hutton are two of the latest and most celebrated of these philosophers, being the leaders of the rival factions of the Vulcanists and Neptionists so called from their different definitions of the terrestrial system. Werner considering that the globe was anciently covered by a vast solution, differing from our existing seas, and that this chaotic ocean contained the elements of the primitive lands, whilst Hutton attributed every thing to the agency of internal fire; his theory is the most elaborate, and comprehensive, that has hitherto appeared; giving a general abstract of it here would however exceed the bounds allotted to this disquisition, the defects and inconsistences of both systems have of late years been ably exposed by Lyall, Ure, and many other practical naturalists. Ure after criticising, both cosmological systems, compliments the authors on having decked them out in very technical language although he winds up this eulogium with stating that their theories are almost as fantastical and extravagant as that of some of the ancient philosophers of the Tonic, and Attic, schools. On perusing the geological works of Smith, Maccullock, Lyall, Ure, and other late writers, it will be found that a new school has arisen, in which speculative and dogmatic systems are entirely discountenanced. In Lyall's account of the geological society of London, he states " that the system in vogue is to multiply and record observations, and patiently await the result of some future period, it being their favourite maxim, that the time is not yet come for a general system of geology; but that all must be content for many years, to be exclusively employed in furnishing materials for future generations; by acting up to their principles with consistency, he says, that they have in a few years disarmed prejudice, and rescued the science from the imputation of being a dangerous or at least a

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visionary pursuit."

French naturalists, have also of late years, by the application of the history of organic remains, to the science of geology, given many enlarged views regarding the former changes of the earth; comparisons having been made between ancient and modern fossil specimens, and inferences drawn with regard to their habits.

To proceed however in the more immediate investigation of earthquakes; formerly peculiar states of the atmosphere were considered productive, and prognostic of these convulsions; there is generally allowed to be an intimate connexion, but as Mitchell has remarked, " it is more probable that the air should be affected by the causes of the earthquakes, than that the earth should be affected in so extraordinary a manner, and to so great a depth by a cause residing in the air."

It is however the general opinion of all late authorities, that earthquakes, and volcanoes are intimately blended, being the effects of the same agents, although they give rise to different phenomena on the surface of the globe. I shall therefore first give some account of Sir Humphry Davy's theory of volcanic actions; which is generally allowed to be the most correct and satisfactory. From thermometrical experiments on the temperature of mines, and hot water springs, it has been shewn that the interior of the globe, possesses a high temperature, which in some degree simplifies the problem of volcanic fires. Sir, H Davy says, " that on the hypothesis of a chemical cause for volcanic fires, and reasoning from known facts there appears to be no other adequate source than the oxydation of the metals, which form the basis of the earths and alkalis. He considers, that these from their great affinity to oxygen, could not exist on the surface of the earth, but only in the interior of the globe, and that volcanic fires are occasioned, whenever these are exposed in subterranean cavities to the action of air and water." On examining a stream of lava, issuing from Vesuvius, he ascertained that there was no combustion going on at the moment of its exit from the mountain, on lifting up some of it in an iron ladle it did not ignite more vividly, on being exposed to the air, some of it was poured into a glass bottle containing silicious sand at the bottom, a ground stopper was closed at the moment, and the bottle was found to contain when afterwards examined by the test of nitrous gas as large a proportion of oxygen as common air; when melted nitre was thrown over the lava, it fused from the heat, but there was not the least increase of deflagration, to indicate

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the presence of combustible matter; various other experiments were followed by the same inferences upon another occasion, when flame and steam issued from the crater, there was no indication of carbon. I have however mentioned sufficient to prove, that the causes anciently assigned for volcanic fires, are proved by Sir H. Davy to be fallacious, the most current of these was the combustion of mineral coal, this he says "is most inadequate, for however large the strata of pit coal might be, its combustion under the surface could never produce intense heat, the production of carbonic acid gas, would impede the process and if this cause existed, carbonaceous matter would be found in lava. In England, there is an instance of strata of pit coal having been long burning, but the only result was, baked clay not in any way resembling lava, the action of sulphur upon iron has also been assigned as a reason, but were this the case sulphate of iron would be the chief product of the volcanics, "Sir H. Davy therefore assigns these phenomena to chemical causes, the products of volcanoes giving an idea of the substances primarily active; these are found to contain mixtures of the earths and alkalis in an oxydated and fused state from intense ignition, water and saline substances are also found, such as may be furnished by the sea and air but altered in such a manner, as may be expected from the formation of fixed oxidigied matter. He moreover states, as a reason, why the combustion is not increased, when the volcanic productions pass into the atmosphere, that volcanic fires take place in immense subterranean cavities, and that the access of the air to the acting substances occurs long before they reach the day, lava being the refuse of combustion below, Lyall and several other practical naturalists support these opinions, observing that earthquakes are generally attended and preceded by heavy torrents of rain inundating contiguous regions, water being supposed to percolate and descend by fissures to those cavities accounting in some degree for the prevalence of earthquakes and valcanoes in Islands, and in countries, bordering on the sea. Before the eruption of the hot springs in Iceland, the ground is always agitated, and if the vapours which are condensed in these small cavities are capable of agitating the ground to any extent, what may be expected when they are confined below in extensive subterranean cavities. The intensity of the heat in these regions, and the density of the air from the immense pressure from above can only be imagined when it is known that limestone melts without giving off its carbonic acid under a pressure of 1700 feet of sea which only cor-

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responds with 600 of liquid lava as proved by Sir James Hall. That immense subterranean cavities exist there can be no reason to doubt, there being apparent communications at great distances between different volcanoes. Ure mentions "that the limestone caverns of Carniola contain many hundred thousand feet of cubic air, which he says shews the extent to which subterranean cavities may exist even in common rocks, and the deeper is the excavation, the denser is the air, and the fitter for combustion." Lyall suggests that the circulation of heat from the interior to the surface is probably regulated like that of water, from the surface to the sea, in such a manner that it is only, when some obstruction occurs that the usual repose of nature is broken." In order next to prove the intimate affinity of volcanoes and earthquakes, it will be found, that the former are distributed over vast tracts, and there is plentiful evidence that subterranean fires are continually at work in the spaces between. Earthquakes being of frequent occurrence, hot springs being distributed at intervals impregnated with the same mineral matters as are discharged by volcanoes, and gaseous vapours being discharged plentifully from the soil, several writers have of late years declared, that the energy of subterranean fires has considerably abated, several volcanoes having become dormant; but it would be difficult however to define a time in which a volcano may be said to be extinct, as there are instances on record of a recurrence of eruption after a dormant state of several centuries in the same volcano. In continuance of the proof of the intimate relation of earthquakes, and volcanoes, the region of the Andes is said to be one of the best defined there being an uninterrupted line of volcanic vents, in almost every degree of latitude from the 46 south to the 27 north; in these different provinces hot springs are numerous and mineral waters of various kinds, a year seldom passes without slight shocks of earthquakes, and once in a century convulsions occur by which continuous tracts of land have been raised from one to twenty feet above their former level, many extensive vallies in this chain of mountains, have been filled up with volcanic products; the volcano of Jorullo, which is in about the centre of the range is 40 leagues distant from the sea which is considered important as it shews that proximity to the sea, is not a necessary condition, though the general characteristic of volcanoes; besides the volcanic range of Andes, there are others of even greater extent mentioned, of which a discription would occupy too great a space. The volcanic bands of the Molucca and Sunda Islands, are the nearest however to the continent of

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India, it extends from the Phillippine Islands as far south as Java, and runs as far to the north as Barren Island, in the Bay of Bengal. In all of this tract there are ample evidences of the intimate relation of earthquakes and volcanoes. This relation and affinity being allowed, it only remains for me to make a few general remarks. From chemical researches, it is well known that various changes are going on in the surface of the earth, there being a constant state of waste and repair, chemical composition and decomposition, it cannot therefore be supposed that the interior of the globe is one inert and dormant mass. It is well known that at the periods preceding the eruption of volcanoes, earthquakes were frequent, and that various vapours, gases, and other substances, the result of chemical decomposition escaped suddenly at those periods, and must have been detained below, under a high state of compression, and that these eruptions were attended by a period of subsequent rest. May we not therefore reason justly from these visible effects that the same changes are going on at greater depths and in larger cavities in the interior of the earth by which explosive compounds, whether gaseous, or solid, may be produced, vapours condensed, and changes take place similar to those of volcanic action, although at so great a depth, as to be beyond the reach of observation, which however may be capable of exerting an excessive mechanical power, equal to that required to produce extensive earthquakes. There is a valuable remark in Ure's work, that primitive formations which are oxydized at the surface of the earth exist at a moderate depth devoid of oxygen in the state of simple combustibles, he states "that the crust of the earth consists mainly of six substances, Silica, Alumina, Iron, Lime, Magnesia, and Potash, which when reduced by the chemist to a state of simplicity, become the combustible elements Silicon, Aluminum, Calceum, Magnesium, Polassium, Iron, a mixture of which at common temperatures on coming into contact with water or moist air, would cause fire and explosion—and if the quantities were great, earthquakes and volcanic eruptions would ensue."

Lyall, towards the conclusion of his first volume reasons "that the renovating and destroying causes in the earth are constantly at work, the repair of land being as constant as its decay, the deepening of seas keeping pace with the formation of shoals—he says that if in the course of a century, the Ganges and other great rivers have carried down to the sea, a mass of matter equal to many lofty mountains, we also find that a District in Chili one hundred

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thousand square miles in area, has been uplifted to the average height of a foot or more, and that the cubic contents of the mass that added in a few hours to the land may counterbalance the loss effected by the aqueous action of many rivers in a century." He seems to consider that the dimensions of the planet remain uniform; the internal accession from below by mineral springs and volcanic vents, being counteracted by actions of a different kind, the amount of subsidence and elevation being so proportioned that the distance of the surface from the centre remains unchanged. In his conclusive remarks regarding earthquakes "he says that the constant repair of dry land and the subserviency of our Planet to the support of the terrestrial as well as the aquatic species, are secured by the elevating and depressing power of earthquakes, this cause he says, so often the source of death, and terror to the inhabitants of the globe, which visits in succession every zone, and fills the earth with monuments of ruin and disorder is nevertheless a conservative principle in the highest degree, and above all others essential to the stability of the system." This reasoning of the learned geologist will certainly be more consolatory to the world at large than to those persons whose household property has been disarranged by the late convulsions in Bengal. They doubtless will not be inclined to attribute a conservative agency to that earthquake in particular, they are however the only persons, who from local knowledge can be best capable of supporting an opinion as to the amount of subsidence or elevation whether or not any gaseous vapours escaped from the soil in this instance, and if there are any volcanic products in the districts in which the vibrations of the earthquake were felt. It seems to be generally supposed, that the continent of India is deficient in evidence of volcanic agency, which surely must be owing in some degree to the want of geological scrutiny; the only work which I have casually had it in my power to peruse, is a survey of the Hyderabad country by Doctor Voysey, in which I observe ample proofs of volcanic agency, although the author does not seem to attribute these to the real cause; the nature of many volcanic substances not having been so well understood in the period at which he wrote, as it is now. He mentions that there are many hills in the neighbourhood of Hyderabad consisting of trap, which has an appearance of having been once in a fluid state and that many of the granetic hills are covered with this substance. In one particular instance, the hill of Koulas, there

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was a trap vein which had the appearance of having been ejected from below in a fluid state. The elevated table land of Beder consisting of iron clay rests on a substratum of basaltic trap. In the bed of the Godavery there are two hot springs, rising up through beds of trap, one of which is surrounded with blocks of porous, black Limestone—now as to the origin of trap formations, Macculloch states their mineral composition in all fundamental points resembles that of trap formations; during the period however in which he wrote, the dispute regarding the aqueous and volcanic origin of trap was carried on with great acrimony; on consulting therefore later authorities, it is said, that trap formations, like common volcanic products have a tendency to recur in the same spot, also that they contain cavities exactly similar to those observed in the scoriac of volcanoes. The identity of the chemical composition of Basalt and Lava is mentioned, the constant occurrence of trap rocks in volcanic districts; that chalk under a bed of trap has been found converted into granular marble, there are other evidencies, but the above are sufficient to prove the intimate relation between trap formations and visible volcanic products.

V.—Hints for establishing a new system of supplying tanks with water, adapted particularly for the Carnatic, to enable the cultivation of rice and agriculture in general, to be carried to an indefinite extent without being dependent on the fall of rain in any particular district for a supply of water.

By Lieutenant H. Harriott, 36th Regt. M. N. I.

The subject of the following paper is one well calculated to excite a degree of interest in the public mind at any time, but is more particularly deserving of attention at the present period at the close of a season of almost unexampled scarcity and distress occasioned by the failure of the periodical rains.

Throughout the Carnatic there are large and rapid rivers which during some period of the year are filled from bank to bank, and during the remainder are mere beds of sand.

Hitherto the useless waters have pursued their rapid course to the ocean without benefiting the country through which they pass, except in some cases, where the even surface of the plain has been favourable to directing the stream into artificial channels and by that means irrigating a considerable portion of land, but this plan is

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naturally contracted in its operations and it depends on the ingenuity of man to retain those vast floods of water, which now flow by unused and unheeded. It is evident that Providence has ordained that these rivers should answer other purposes than merely being drainers of the land.

Every person travelling through this country must have observed large tracts of fertile and valuable soil yielding no returns but allowed to run waste. The question naturally occurs from whence does this arise, to which the answer invariably received is, a want of water; and it in consequence, becomes an object of the first importance, alike to the government, and to the people, to ascertain by what means the requisite supply of this essential element can be obtained.

The following detail though in itself imperfect, may it is hoped, be the means of attracting attention to this interesting subject.

The few opportunities that have been afforded me of acquiring information on the subject, prevents me from placing the ideas that have suggested themselves to me in so advantageous a light as a more competent person would be capable of doing. I have generally observed that near most rivers and in many cases connected with them, are deep, and extensive ravines. It appears to me that at a small expense, small in comparison with the enormous sums lavished in keeping in repair the numerous tanks throughout the country, these ravines might be formed into basins, capable of containing an immense body of water, the said basins having a canal (the neck as it were attaching the head to the body,) between them and the river, with floodgates to be shut or opened at pleasure, should the nature of the ground be adapted for the purpose, and in most situations such will be found to be the case, the sides of the basin may be elevated considerably above the level of the river. To fill the basin, under such circumstances, a steam engine would be requisite for raising the water from the river and conducting it into its allotted channel. If a forcing pump can raise a volume of fluid to the height of 32 feet by mere manual labour, it will only require an engine of limited powers to throw up water to the extent of 20 feet, allowing 20 feet *below* the surface the full depth will give a fair average of the quantity required, of course the extent of ground to be brought into cultivation will depend on the supply of water that the reservoir is capable of containing, allowing for evaporation, the

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number of cubic feet of water by actual measurement can be ascertained, and a proportionate quantity of ground planted or laid out with the certainty of realizing one or more crops which at present can never be the case whilst dependant on the precarious state of the weather. How often in this country, it may be asked, has the toil of the peasant and the seed been thrown away from the want of a small quantity of seasonable rain to bring the crop to maturity ; so partial indeed is the rain, that whilst one part of the country is comparatively deluged, another within so short a distance as 50 miles is almost dry. This is not the case however with regard to rivers, which flowing through a vast extent of country and in most cases feeling the influence of both monsoons, are certain at some period of the year of containing an abundant supply of water, and should apprehension prevail of a failure of that supply by the river going rapidly down, it will only be necessary to increase the power of the engine to derive additional advantage from it, while it lasts.

When the quantity of water in the reservoir which is above the level of the plain has been expended, the same engine may be employed in raising the remainder—a strict attention to the theory of hydraulics will greatly economise the power to be put in motion. Surely, if the enormous sums expended on tanks under the present system (such for instance as that of Carongooly) can repay with profit to the renter, and advantage to the government, their aggregate outlay, even when four or five successive seasons fail in production, and from what I have been able to ascertain, it appears that only in very favorable years the tank is completely filled, and the whole of the paddy land brought into cultivation, the new system will certainly produce an immense net revenue or interest on the outlay of capital after the payment of the labourer, and the contingent expenses of working the engine. At first from the novelty and difficulty of procuring Engineers the expense of cultivation will be greater than when clever and scientific natives are brought forward, and I am sure there are many to be found both capable and willing after a little instruction to superintend the management of the engines: in proof of this opinion I would adduce the instance of how closely all mechanical improvements from England are copied by the Indian artisan.

The floodgates of the reservoir might be constructed of iron, wrought in the works at Porto-Novo, and fuel for working the engines

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is to be found in abundance in all parts of the country. The paths dividing the plots of paddy ground might be planted with palmyras and cocoanut trees, which during their growth would be useful in many ways and when old could be cut down and cut up into logs for the fires. To prevent evaporation as much as possible, the form of the reservoir should be an oblong oval, the banks or bands turfed and planted with the most umbrageous trees, the roots of which striking into the earth, will give a stability to the soil, whilst the branches shade the water from the direct rays of the sun.

The situations best calculated for the plan of operations here proposed, can be ascertained by consulting the maps of the several collectors which have been framed upon actual survey of the country. It might surely be advisable for the government to take the necessary measures for ascertaining the probable result of the project, but should government decline risking, if risking it can be called where a certainty of gain based on accurate calculations is positively ensured, individual enterprise might, especially at the present time when it is difficult to get any return for capital, find it advantageous to attempt an improvement on the old system, which, from its not having kept pace with the progressive improvement of ages, now yields inadequate returns.—Surely no project can be more deserving of the attention and encouragement of a liberal government, than the introduction of steam engines for the purpose of improving the agricultural process in India, as it will be the means of bringing large tracts of land into cultivation, which are now lying waste, and of rendering these territories independent of requiring foreign aid, as at present, in every occasion of scarcity.

There are numerous other advantages likely to arise from the adoption of this scheme, which are too obvious to require any lengthened comment, and I am sure that every generous mind would rejoice in the prospect of seeing India rise from her depressed state and condition by the very means which has raised England, to her present commercial superiority.

VI.—Note, by a Member, on Colonel Bowler's description of the branched Palmyra trees.

The occassional occurrence of these trees is a frequent subject of surprise and remark, and being apparently inconsistent with the established opinions on the structure and physiology of the family

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of plants to which they belong, the explanation given by a distinguished French Botanist may prove interesting to some of the readers of the Journal. The stipe or stalk of palms is in many respects allied to a bulb and in consequence it is seldom branched, as branches are always produced by the elongation of a bud, which is usually placed in the axilla of a leaf; but in the monocotyledous plants, or those whose seeds are not divided into two portions, these axillary buds almost always prove abortive or remain in the rudimental state as in the palms, and hence the stipe is perfectly simple; but occasionally some of the buds receiving more nourishment than the others become developed, that is to say, the leaves that compose them uniting at their base, form a new stipe, springing from the old. Instances of this may be observed in some species of yucca and in the Cucifera Thebaica (American Palms.) *Richard's Botany.*

Without referring to the interesting discoveries in the physiology of animals, made of late years by a careful study of monstrous productions, it is evident that these anomalies of the growth of Palm trees assist in a remarkable manner the enquirer into the structure of plants of this class, by bringing to light the existence of rudimental parts which might have otherwise escaped detection, and are also interesting in demonstrating the effects of the unnatural or unhealthy execution of the nutritive functions. It should be kept in mind that all branches are truly distinct individuals or the viviparous progeny of the stem on which they are formed, their rudiments existing from the first formation of the germ, till circumstances at some indeterminate period, unfolds it into a perfect branch, and that if the vital energy is unusually augmented the bud may be unfolded into a perfect branch before the natural period in which it would have progressively become so.

The process here described I have witnessed from its commencement in the Palmyra (Borassus Flabelliformis) but the young branch did not appear likely to attain to any size or prolonged existence. The soil was favourable and the trees flourishing. I have also seen the process going on in the common wild date tree (elate silvestris,) where it seemed to arise from the head having been injured and a consequent oversupply of nutrition sent to the other parts.

In the tree No. 2, of Colonel Bowler's sketches, the cause was

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probably irregular action from defective nourishment, the soil being unfavourable. In No. 4, it is probable, that the head had been injured as in the date tree alluded to.

VII.—*At a Meeting of the Madras Literary Society and Auxiliary of the Royal Asiatic Society, held at the Society's Rooms, at the College, on Thursday evening the 28th November* 1833.

Present.

The Honorable W. Oliver, Esq. *in the Chair.*

Dr. T. H. Davies,	J. A. R. Stevenson, Esq.
Lieut. Col. Napier,	J. G. S. Bruere, Esq.
Revd Mr. Harper,	C. V. Lutchmiah, and
J. Ouchterlony, Esq.	J. C. Morris, Esq. *Secretary.*

The Secretary is requested to read the paper selected for perusal, being a continuation of Lieut. Conner's Memoir of the survey in Travancore.

The Secretary lays before the meeting the following letter from the Secretary to a Society established at the Cape of Good Hope for exploring central Africa.

Sir,

I am instructed by the "Managing Committee of the Cape of Good Hope Association for exploring central Africa" to communicate to you, for the information of the Royal Asiatic Society at Madras, the views with which this Association has been recently established, and the grounds on which they hope to receive such encouragement and assistance from those scientific societies and individuals to whom the objects of their undertaking must necessarily be interesting, as may enable them to effect their purpose in a manner generally advantageous to the public and creditable to the British nation.

In further explanation of the statement contained in the printed papers, which I have now the pleasure of enclosing, I take the liberty of troubling you with the following observations:—

The principal aim of the leader of the expedition, which it is proposed to equip with as much speed as our circumstances may allow, will be to penetrate, if it be found practicable, through the central districts of southern Africa to the Equator—to make himself acquainted with the native tribes located in those parts of the continent thro' which his course will lie and to establish relations of amity

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and commerce with them by which the natural produce of the Interior may be more readily obtained, the demand for British, manufactures and colonial articles increased, and a door opened for carrying the " Glad tidiugs" of salvation to the uninstructed heathen beyond the present limits of missionary operations.

In conjunction with these important objects, the interests of science in many of its most valuable branches will be essentially promoted: the *geographical* situation of the various tribes, the course of rivers, and the principal landmarks, will be determined by accurate observations and correctly laid down for the guidance of future travellers, and the advancement of geographical knowledge in a country to which it has not hitherto extended—the *geological* structure of the rocks and mountains and the quality of the alluvial soil, from which a presumption may be entertained of the mineral riches of the land, and its capability of culture, will be closely investigated and illustrated by a copious collection of instructive specimens;—The field for *Botanical* research in which there is every reason to expect a large accession of new and interesting subjects,—as well as the *animal* Kingdom still unexamined in the vast tropical regions south of the Equator, will be carefully explored; and in each of these departments of natural history no pains will be spared to render the expedition competent to fulfil the expectations which it is calculated to excite among the friends and professors of general science.

Situated as this Colony is with regard to central Africa, great advantages will be enjoyed by persons proceeding on a journey of discovery from hence in as much as they will be enabled to choose the most favourable season, to set forward in possession of the health and strength derived from a most salubrious climate, and with the confidence of being able to return if insurmountable difficulties or noxious regions oblige them to retreat; upon a land of friends and an invigorating atmosphere.

As the success of such an expedition must in a great measure, if not wholly, depend on the qualifications of its leader, the Committee consider that they possess the best security for accomplishing the various objects above enumerated in the character and talents of the gentleman to whom the charge and conduct of the enterprize have been entrusted; and they have no doubt that he will receive every support and assistance in his arduous undertaking from those individuals who have been or may be appointed to form his company and divide his labour.

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The sum of money at present raised in the Colony about £ 600, is by no means adequate to the fitting out and sustaining of the Expedition upon a scale large enough to warrant anticipations of accomplishing all that has been above referred to as included in the proper scope of such an experiment, and no great addition to this sum can be expected from private sources.

As therefore, the objects of the intended expedition into central Africa regard not only the benefit of this Colony and of the native tribes in the interior, but the promotion of moral and natural science in general, in a new and deeply interesting sphere:—as the greatest probability exits of its being able to explore a country fruitful in the works of nature and unknown to former travellers, and thereby of reaping a rich harvest for the advantage and information of the British public—the Committee feel justified in soliciting the aid of public bodies and individuals in Great Britan and India, to enable them to carry on their operations and to take such measures as may best serve the accomplishment of their design.

The Committee request that you will be good enough to lay their communication before the Royal Asiatie Society of Madras, and to make known their views to any such scientific persons within the presidency as may be likely to take an interest in their proceedings.

I would beg the favour of an answer at your earliest convenience as the Expedition must necessarily leave Cape Town early in next year, and it is most desirable that the extent of its means should be ascertained previous to its departure.

I have the honor to be, Sir,
your faithful obedient servant,
(Signed) E. G. Burrow, D. D.
Secretary for Correspondence.

Resolved, that the foregoing letter and the prospectus which accompanied it be circulated to the members of the Society, with a Book soliciting donations in support of the undertaking.

The thanks of the Meeting were voted to the Honorable the Chairman.

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VIII.—METEOROLOGICAL REGISTER KEPT AT THE MADRAS

	Standard Barometer No. 3 by Gilbert.							Standard Therm. by Troughton.						
	Sun Rise.	10 A. M.	App. Noon.	2 P. M.	Sun Set.	8 P. M.	10 P. M.	S. Rise.	10 A. M.	App. Noon.	2 P. M.	S. Set.	8 P. M.	10 P. M.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	°	°	°	°	°	°	°
1	30,096	30,138	30,110	30,067	30,068	——		76,0	80,1	81,3	83,2	81,2	----	
2	,090	,166	,126	,078	,074	30,118		78,0	78,0	77,6	78,5	78,5	79,0	
3	,090	——	,110	,078	,064	,086		79,9	81,5	83,0	82,1	81,0	80,5	
4	,062	,112	,087	,030	,028	,056		77,3	81,5	83,0	81,8	80,7	80,0	
5	,062	,114	,094	,038	,042	,100		76,8	81,5	83,0	83,2	81,0	80,8	
6	,082	,124	,102	,044	,054	,084		75,8	79,0	81,0	82,7	79,9	79,9	
7	,078	,128	,108	,044	,052	,074		78,0	81,1	82,0	82,2	80,0	79,5	
8	,062	,132	,102	,052	,052	,074	30,126	76,4	80,0	79,0	81,5	80,0	78,8	78,7
9	,088	,138	,132	,080	,060	,088	,100	74,0	80,0	81,1	81,1	79,3	78,1	77,8
10	,072	——	,100	,042	,062	,078		75,0	----	82,0	78,3	77,8	77,5	
11	,060	,108	——	,038	,072	,084		77,8	81,0	----	81,6	78,8	79,0	
12	,076	,149	,130	,056	,072	,1[illegible]8		77,7	79,0	80,6	80,4	77,7	76,8	
13	,062	,145	——	,022	,042	,094		77,2	79,2	----	79,8	79,0	79,0	
14	,064	,090	,070	,032	,040	,062		78,0	80,9	82,0	81,0	80,4	78,0	
15	,040	,072	,050	,018	,022	,060		77,0	80,0	81,0	81,1	79,9	79,8	
16	,060	,090	,056	,044	,058	,066		77,0	80,5	81,0	82,0	80,4	79,0	
17	,060	——	,098	,058	,076	,100	,104	75,9	----	80,9	81,8	79,5	78,0	78,9
18	,060	,152	,130	,060	,068	,108	,134	75,8	81,2	82,0	82,3	80,0	79,1	79,7
19	,100	,190	,178	,132	,144	,180	,188	79,0	82,0	82,8	82,5	80,3	80,0	79,7
20	,168	,200	,176	,149	,156	,173	,188	76,5	81,9	82,1	82,6	80,0	79,2	78,9
21	,156	,186	,168	,132	,138	,152	,160	74,5	80,2	80,9	82,0	79,0	76,9	75,6
22	,134	,162	,148	,128	,128	,136	,152	75,0	80,1	81,0	81,8	79,3	78,5	77,5
23	,140	,188	,166	,150	,136	,150	,158	72,0	79,9	81,0	81,6	79,5	78,7	77,5
24	,150	——	,164	,140	,136	,150	,152	73,5	----	81,2	81,3	79,5	79,0	79,2
25	,136	,164	,150	,134	,140	,150	,150	79,2	82,7	82,8	82,7	80,5	79,9	79,6
26	,134	,166	,152	,136	,140	,156		78,0	76,5	76,4	77,0	79,0	79,0	----
27	,140	,176	,162	,134	,138	,138		78,0	80,4	80,9	81,0	79,2	79,0	----
28	,138	,162	,148	,136	,126	,128		77,6	81,5	82,0	81,9	80,0	79,7	----
29	,116	,150	,132	,118	,118	,136		78,3	80,9	82,0	81,6	80,2	78,9	----
30	,132	,162	,150	,132	,126	,134		79,1	80,6	80,8	80,6	79,2	79,0	----
Mean	30,077	30,145	30,125	30,084	30,088	30,112	30,147	76,8	80,6	81,2	81,4	79,7	79,0	78,5

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OBSERVATORY; FOR THE MONTH OF SEPTEMBER 1833.

	Dep. of wet bulb Thermometer.							Rain.		Evaporation.	Wind.	Remarks.
	S. Rise.	10 A. M.	App. N.	2 P. M.	S. Set.	8 P. M.	10 P. M.	S. R.	S. S.			
	o	o	o	o	o	o	o	Ins.	Ins.	Ins.		
1	8,8	12,0	14,0	15,5	7,0	7,7		,229			s e. s w. n w.	Most. cloud. light.
2	8,5	13,1	14,5	16,3	15,0	14,9	13,7				s w. n w.	Do. Do.
3	10,1	12,9	16,0	16,3	14,8	11,3					Do.	Do. Do.
4	7,5	12,1	12,4	12,3	10,6	7,0		,187		2,347	Do.	Do. Do.
5	4,8	7,0	9,0	9,8	7,0	4,5	4,7				Do.	Gen. clear Do.
6	6,0	12,3	11,9	14,6	6,2	5,9					Do.	Cloudy.
7	5,5	9,6	14,4	10,3	8,0	8,0	7,2				Do.	Do. rain at night.
8	4,9		9,8	12,6	5,2	4,9	4,2	,090	1,264		Do.	Day cl. hvy. rn. af.
9	4,6	7,2	6,0	8,6	5,0	5,0	4,4				Do.	Do. vivid light.
10	4,0	5,3	5,5	6,5	4,7	2,8	3,9	,001			s. & s w.	Do. Do.
11	4,0	4,0	6,5	6,4	6,0	4,8	4,0			1,764	Do.	Do. Do.
12	3,3	5,4	9,1	7,6	3,9	5,8	4,0				s w. w. n w.	Clear af. clou. do.
13	4,8	7,1	5,6	7,4	5,0	3,8	3,5		,132		Do.	Do. vivid Do.
14	3,6	7,1	6,8	7,0	4,9	4,4	4,0				Do.	Do. Do.
15	5,1		7,0	8,9	6,3	5,7	5,0				Do.	Do. Do.
16	5,7	8,4	9,3	7,0	5,0	4,1	4,7				Do.	Cloud. th. & lig.
17	5,1	7,7	5,6	5,8	3,2	5,5	4,1		,431		Do.	Do. Do. Do.
18	4,7	7,5	7,6	10,4	4,2	2,9	3,4	,017		2,510	Do.	Do. Do. Do.
19	4,7	6,5	9,2	6,9	6,7		5,6				Do.	Do. Do. Do.
20	4,5	4,8	6,8	8,4	5,8	4,2	5,0	,782			Do.	Clear Do.
21	9,5		8,4	8,3	5,7	5,0	3,5				Do.	Do. Do.
22	6,0	6,8		6,3	6,0						Do.	Cloudy Do. Do.
23	5,8	6,9	8,7	9,2				,020			Do.	Do. Do. Do.
24	5,0	6,7		8,9	7,5	6,6	6,0	,263			s w. & w.	Mostly Do. Do.
25	5,2	11,3	13,7	14,8	8,0	6,8				1,236	Do.	Do. Do.
26	8,3	9,9	11,0	12,5	11,2	7,0					Do.	Do. night cl. Do.
27		11,2	13,8	14,6	9,0	7,3	5,8				Do.	Do. Do.
28	8,8	11,6	11,6		5,9	11,7					s w. & n w.	Cloudy Do.
29	10,5	13,5	14,3	17,0	14,3	12,1					w. n w. s w.	Mostly cloudy
30	8,4	11,5	15,3	17,0	12,0	8,5	6,5				w. n w. & s.	Mostly clear
Mean	6,1	9,2	10,1	10,6	7,2	6,6	5,1					

Total depth of rain during the month 3,476 Inches.
Evaporation 8,417 „

METEOROLOGICAL REGISTER KEPT AT THE MADRAS

	Standard Barometer No. 3 by Gilbert.							Standard Therm. by Troughton.						
	Sun Rise.	10 A. M.	App. Noon.	2 P. M.	Sun Set.	8 P. M.	10 P. M.	S. Rise.	10 A. M.	Aft. Noon.	3 P. M.	S. Set.	8 P. M.	10 P. M.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	°	°	°	°	°	°	°
1	29,902	29,950	29,915	29,858	29,832	29,872		84,3	89,1	90,0	92,0	84,0	83,2	
2	,888	,933	,886	,838	,836	,856		85,7	88,4	91,0	94,0	93,0	90,0	
3	,882	,906	,897	,832	,828	,884		82,5	89,8	91,6	95,8	87,3	88,6	
4	,870	,888	,872	,800	,808	,832	29,862	84,0	89,5	93,0	94,6	88,5	85,3	84,0
5	,854	,884	,892	,801	,820	,864	,882	84,0	91,1	94,1	89,4	88,6	86,9	85,9
6	,885	,910	,892	,828	,856	,916	,928	83,[illegible]	88,3	89,0	86,0	85,1	83,8	84,0
7	,910	,952	,914	,856	,856	,896	,912	81,3	86,0	88,4	80,2	84,2	83,2	82,8
8	,906	,952	,934	,860	,885	,890	,938	81,0	83,8	86,5	84,8	83,5	82,8	82,8
9	,908	,952	——	,856	,858	,922	,948	79,5	82,0		84,1	82,0	81,8	81,1
10	,928	,984	,962	,904	,922	,944	30,006	80,0	82,9	84,0	83,8	82,5	80,5	81,3
11	30,013	30,050	30,038	,990	,970	30,024	,050	79,0	83,8	85,0	85,3	83,0	82,3	82,6
12	,034	,060	,048	30,000	,994	,031	,050	80,0	84,4	85,8	85,0	82,9	82,0	81,2
13	,032	,042	,013	29,950	,940	29,978	,028	80,0	84,1	85,9	86,0	83,3	82,1	82,[illegible]
14	,016	,060	,036	,990	,950	,392	,004	79,5	83,9	87,0	85,6	83,3	82,4	82,2
15	,038	,066	,048	,988	,970	30,018	,052	82,0	85,9	88,0	86,8	84,2	83,6	82,8
16	,014	,058	,036	,996	30,002	,020	,050	81,0	85,6	87,9	87,0	84,9	83,3	83,0
17	,012	,054	,039	30,000	29,988	,016	,050	80,0	85,7	87,0	86,0	85,0	84,[illegible]	83,8
18	,020	,062	,036	29,980	,992	,034	——	80,9	85,3	86,9	85,4	83,7	83,[illegible]	
19	,042	,088	,074	30,034	30,030	,080	,084	79,5	85,7	85,6	85,0	82,9	81,5	82,1
20	,120	——	,142	,108	,114	——	,162	80,0		84,0	85,8	84,0		82,0
21	——	——	——	,126	,118	,136	,174	79,0	85,0	86,2	87,1	84,1	83,[illegible]	82,5
22	——	——	,168	,092	,086	,110	,124	80,9	82,8	84,0	86,9	83,5	83,0	81,7
23	,110	,164	,150	,116	,086	,110	,138	79,2	83,8	86,5	86,8	83,0	82,1	82,1
24	,136	,176	,167	,148	,131	,100		76,5	85,0	86,9	87,3	84,0	81,8	
25	,194	,216	,180	,148	,086	,108	,140	80,0	78,0	82,0	83,3	81,5	80,9	80,9
26	,144	,178	,158	,088	,035	,084	,088	78,0	83,6	83,0	84,1	82,6	82,0	82,4
27	,084	——	,087	,038	29,990	,026	,044	79,5		82,9	80,7	80,8	81,0	81,0
28	,042	,092	,082	,006	30,018	,046		78,0	79,8	81,5	80,9	79,9	80,0	
29	,030	,084	,034	29,995	29,998	,022	,052	77,8	77,8	77,0	84,0	80,2	79,5	79,7
30	,080	,130	,100	30,054	30,062	,102	,114	77,5	80,6	81,5	81,9	80,0	79,2	79,6
31	,098	,124	,112	,084	,064	,102	,116	76,0	79,6	83,0	82,0	80,9	78,8	79,0
Mean	30,007	30,041	30,030	29,968	29,967	30,000	30,044	80,3	84,5	86,2	86,1	83,7	82,4	82,1

OBSERVATORY; FOR THE MONTH OF OCTOBER 1833.

	Dep. of wet bulb Thermometer.							Rain.		Evaporation.	Wind.	Remarks.
	S. Rise.	10 A. M.	App. N.	2 P. M.	S. Set.	8 P. M.	10 P. M.	S. R.	S. S.			
	o	o	o	o	o	o	o	Ins.	Ins.	Ins.		
1	9,3	12,9	15,2	17,5	5,7	5,0				2,708	S W. N W. N E.	Flying clouds
2	9,9	13,2	15,2	19,3	19,2	15,3					W. N W. S W.	Mostly clear
3	8,0	18,3	14,3	19,6	10,6	11,4					Do.	Do. lightning
4	7,9	15,1	18,2	16,7	9,7	8,6	7,2				W. S W. S E.	Do.
5	8,0	10,8	16,5	0,5	9,6	6,7	8,5		,010		N W. N E. S E.	Cld. thun. & lig.
6	6,2	11,3	9,2	8,2	5,6	4,9	4,7				Do.	Do. Do.
7	6,3	7,1	11,[illegible]	3,2	6,5	5,3	3,8				Do.	Do. Do.
8	4,6	6,8	9,2	6,4	6,6	4,8	4,0	,410		2,094	Do.	Do. loud th. & li.
9	4,0	5,0		5,1	3,6	3,8	4,1	1,917			Do.	Do. Do.
10	4,2	5,1	6,1	5,9	3,3	2,7	4,0	,541			Do.	Do. Do.
11	3,6	5,7	5,2	6,3	4,5	4,4	3,8				S W. S E S.	Gen. clear Do.
12	3,9	5,4	6,0	7,0	4,9	3,9	4,2				Do.	Do. Do.
13	4,0	6,9	7,1	7,0	6,4	5,5	4,2				Do.	Do. Do.
14	4,8	6,5	8,8	7,4	5,3	4,4	3,6				Do.	Do. Do.
15	5,3	7,6	9,0	7,1	5,0	4,3	3,5			1,361	Do.	Do. Do,
16	5,5	7,9	10,8	10,0	7,8	6,3	4,0				Do.	Do. Do.
17	3,3	8,7	8,2	8,8	7,5	6,2	5,1				Do.	Do. Do.
18	4,6	7,2			6,7	4,6		,270			Do.	Do. Do.
19	3,8	8,0	8,0	6,8	6,4	5,4	3,5				Do.	Clouded Do.
20	3,2		5,0	7,6	6,2		5,0		,209		E. S E. S.	Do. Do.
21	3,2	7,9	7,2	9,1	7,0	6,1	2,8				W. N W. S E.	Do. Do.
22	4,2	7,2	8,0	11,1	7,8	6,2	5,4			1,451	N. N W. N E.	Thick hazy Do.
23	3,6	7,1	10,1	14,0	8,3	7,3	7,3				W. E. N E.	Mostly clear Do.
24	2,2	8,3	8,8	10,4	7,0	3,0					N W. N E. S E.	Do. th. li. hy. rn.
25	3,4	2,9	6,8	7,3	5,1	4,9	4,8	3,375	,174		N W. E. N E.	Clouded
26	2,2	5,5	5,1	4,9	5,9	4,7	4,7	,167	,302		N E. S E.	Do thun. & light.
27	3,7		4,7	4,2	4,8	4,3	3,9	,118	,503		S W W. N. N E.	Do. Do.
28	3,2	4,7	4,9	5,4	6,1	5,8		,045	,208		N W. N E.	Do. Do.
29	3,3	3,4	2,3	10,8	3,8	3,5	3,7		,368	1,406	Do.	Do. Do.
30	3,5	4,8	4,5	6,3	5,0	4,2	4,2	,334	,035		Do. & S E.	Mostly cldy. light.
31	2,0	3,6	5,3	6,0	5,9	4,3	7,6	,272	,471		Do. Do.	Do. Do.
Mean	4,7	7,6	8,6	9,0	6,7	5,6	4,7					

Total depth of rain during the month 9,729 Inches.
Evaporation 6,988 „

METEOROLOGICAL REGISTER KEPT AT THE MADRAS

	Standard Barometer No 3. by Gilbert.							Standard Barm. by Troughton.						
	Sun Rise.	10 A. M.	Dep. Noon.	2 P. M.	Sun Set.	8 P. M.	10 P. M.	Sun Rise.	10 A. M.	Aft. Noon.	2 P. M.	Sun Set.	8 P. M.	10 P. M.
	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	Ins.	0	0	0	0	0	0	0
1	29,918	29,936	29,916	29,864	29,828	29,850	——	83,5	86,9	89,9	92,9	86,8	87,2	
2	,920	,940	,912	,850	,836	,860	29,924	83,3	88,8	90,7	92,8	91,8	89,8	87,2
3	,922	,950	,930	,890	,860	,878	——	85,0	87,8	91,0	92,8	90,6	86,3	
4	,920	,940	,928	,886	,874	,918	——	84,5	87,8	89,3	91,1	88,8	86,3	
5	,896	,944	,924	,882	,850	,860	,890	81,3	85,0	87,0	88,7	85,0	82,8	82,0
6	,872	,920	,908	,868	,834	,840	——	82,8	87,0	90,0	92,5	86,1	83,9	
7	,842	,876	,868	,818	,804	,832	,840	82,0	85,0	89,0	88,0	85,0	83,8	83,6
8	,842	——	,834	,794	,782	,808	,822	81,8		86,8	90,0	84,2	81,9	81,4
9	,826	,900	,876	,814	,808	,860	,906	80,9	84,6	85,0	85,0	83,3	83,0	82,9
10	,904	,956	,940	,898	,878	,896	,952	81,0	84,8	85,9	86,8	84,1	83,0	82,9
11	,923	,964	,952	,886	,860	,918	,964	82,3	86,8	86,7	86,5	85,0	83,8	82,8
12	,950	,994	,966	,912	,890	,916	,956	80,9	85,0	87,9	87,8	84,0	83,0	82,9
13	,920	,960	,951	,912	,864	,903	,944	82,8	85,0	85,3	86,6	83,0	82,5	82,4
14	,918	,972	,942	,866	,834	,894	,906	81,0	86,0	86,4	86,0	83,0	82,4	82,0
15	,892	——	,904	,858	,836	,862	,907	80,3		86,4	88,6	84,1	83,5	83,0
16	,892	,950	,920	,850	,828	,898	,914	80,6	85,0	87,2	85,9	83,0	83,0	82,5
17	,874	,934	,892	,846	,860	,874	,891	81,6	87,0	84,2	83,7	83,0	82,0	81,8
18	,852	,886	,866	,826	,830	,868	,890	81,5	85,0	87,0	89,5	84,0	82,8	82,4
19	,870	,910	,900	,848	,830	——	,928	79,9	82,9	86,2	85,7	83,7		81,8
20	,948	30,032	30,000	,934	,914	,928	,974	81,2	83,0	84,3	86,5	83,8	82,0	77,0
21	,958	——	29,980	,907	,898	,910	,962	83,9		85,2	86,3	83,5	83,0	82,7
22	,926	29,952	....	,906	,884	——	——	81,0	82,0	....	85,3	85,0		
23	,922	30,004	,942	,902	,876	——	——	81,8	82,5	84,8	85,4	84,2		
24	,934	29,966		,890	,890	,922	,952	80,2	82,4		84,9	84,8	84,2	83,0
25	,928	,974	,964	,904	,880	,910	——	80,6	86,0	88,2	90,0	85,0	84,7	
26	,942	,980	,943	,860	,854	,893	——	83,0	86,0	87,0	89,5	90,0	84,8	
27	,902	,950	,918	,840	,842	,868	,894	82,0	86,7	89,0	90,8	90,0	83,8	85,5
28	,840	,919	,887		,822	,860	——	83,7	87,0	89,6		90,0	88,7	
29	,848	,912	,896	,860	,864	,864	——	85,0	88,0	90,2	92,5	90,0	88,0	
30	,898	,950	,942	,888	,886	,896	,916	84,4	88,7	91,6	93,9	90,0	87,0	84,5
Mean	29,900	29,947	29,921	29,871	29,853	29,881	29,917	82,1	85,7	87,6	88,5	85,8	84,3	82,7

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OBSERVATORY ; FOR THE MONTH OF NOVEMBER 1833.

	Dep. of wet bulb Thermometer.							Rain.		Evaporation.	Wind.	Remarks.
	S. Rise	10 A. M.	Aft. N.	2 P. M.	S. Set.	8 P. M.	10 P. M.	S. R.	S. S.			
	°	°	°	°	°	°	°	Ins.	Ins.	Ins.		
1	2,5	3,3	4,2	6,0	4,9			,086	,104		N. N. E. E.	clouded light.
2	3,0	2,0	1,8	2,3	1,9	2,0		,288	,784		Do.	Do. Do.
3	3,9	4,0	7,5	5,9	6,4	4,7		,979			Do.	Do. Do.
4	2,8	7,1	8,9	8,0	5,4	5,0					N. W. N. E. N.	Do. Do.
5	2,5	5,5	6,0	5,7	3,0	4,8			,004		N. E. N. N. E.	Do.
6		3,5	3,4	4,9	4,0	4,8		,222	,069	1,190	N. N. W. N. E.	Do.
7	3,0	3,9	5,8	6,0	3,9	3,5		,549	,062		N. N. E.	Do.
8	1,9	4,9	3,5	5,5	4,0	7,0	6,4	,035	,556		N. W. N. E. N.	cloudy. clear light
9	3,0	5,3	6,3	3,3	2,8	3,6	2,9				N. N. E. E.	Do. Do.
10	2,0		5,7	3,1	2,2	2,2			,590		Do.	Do. heavy rain.
11	2,8	3,0		5,6	4,1	3,8		2,347	,160		Do.	Do.
12	4,7	2,7	4,4	4,1	3,1	2,4		,003	,694		Do.	Do.
13	2,7	4,1		3,7	3,8	3,5		,017	,451	1,000	Do.	Do.
14	3,0	4,3	4,8	4,4	4,6	3,7		,090	,090		E. N. E. N.	Do.
15	2,5	4,2	4,7	5,3	5,6	4,8		,052	,028		Do.	Do.
16	3,3	4,1	4,5	7,0	5,1	3,4		,729			Do.	Do.
17	2,2		5,7	3,8	6,9	4,0	6,9				Do.	mostlycloudy clear
18	4,5	6,7	7,1	7,3	7,7	7,1	5,5				Do.	Do.
19	6,5	7,0	7,3	8,4	6,5	7,0	6,7				Do.	Do.
20	3,6	8,3	8,4	9,4	8,0	7,3	6,9			1,600	Do.	Do.
21	3,8	6,5	7,9	10,2	8,0	6,1	5,6				Do.	clear throughout.
22	4,6	9,8	10,0	9,6	8,0	8,3	6,8				N. W. N. E. N.	Do. Do.
23	2,9	8,4	8,0	5,6	4,5	4,7	5,2				Do.	Do. Do.
24	3,5		4,5	5,4	7,6	7,2	6,0				N. W. N. E. E.	clouded.
25	4,7	4,5	6,9	6,7	9,3	4,9	4,0		,069		N. E. S. E.	cloudy.
26	3,8	2,6	1,7	2,3	5,0	5,2		,031	,778		N. N. E. E.	Do. thunder.
27	4,7	6,9	6,7	7,1	6,2	6,1				1,962	Do.	Mostly cloudy.
28	5,6	7,6	8,0	8,1	7,0	5,7					Do.	Do. Do.
29	6,4	7,9	8,0	8,9	6,4	4,1					Do.	Do. Do.
30	5,3	6,0	6,2	6,4	6,2	6,1		,035	,021		Do.	Do. Do.
Mean	3,6	5,3	6,0	6,0	5,4	4,9	5,7					

The depth of rain during the Month 9,923 Inches
Evaporation 6,162 „

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The instruments used in the foregoing observations are placed upon a table 3 feet high in the western verandah of the Honourable Company's Observatary; from the Mean of five Barometrical measures lately made the floor of the verandah appears to be *about* 26 feet above the level of the Sea (not 45 as was before erroneously supposed.) The barometrical indication are those read off from the instrument, without any reduction for corpillary action or temperature; for the former, the correction answering to 0,20 inches diameter or +, 059 inches should be employed—The Madras Observatory is situated at about two miles from the sea in longitude 5 Hours 21 Minutes 9 Seconds east of Greenwich and 13 Degrees 4 Minutes 9 Seconds north Latitude.

T. G. TAYLOR,
H. C. Astronomer.

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